JVC

SERVICE MANUAL

MODEL

RC-660 L/LB/LD/LE/LS

STEREO RADIO CASSETTE RECORDER

No. 1533
June 1983

Contents

	Page
Specifications	2
Safety Precautions	2
Location of Controls	4
Location of Main Parts	4
Removal of the Main Parts	5
How to Engage Dial Cord	6
Main Adjustment	6
Standard Schematic Diagram of RC-660L/LB (Tuner)	9
Standard Schematic Diagram of RC-660LD (Tuner)	10
Standard Schematic Diagram of RC-660LE (Tuner)	11
Standard Schematic Diagram of RC-660LS (Tuner)	12
Standard Schematic Diagram of RC-660L/LB (Amplifier)	13
Standard Schematic Diagram of RC-660LD/LE/LS (Amplifier)	14
Block Diagram	15
Tuner P.W. Board Parts and Parts List	16
Amplifier P.W. Board Parts and Parts List	18
Amplifier P.W. Board Parts List	19
Amplifier P.W. Board of RC-660LD/LE/LS	21
Wiring Connections	22
Mechanism Component Parts List	23
Mechanism Component Parts	25
Enclosure Assembly Parts	26
Enclosure Assembly Parts List	27
Packing	28
Packing Parts List	29
Accessories	29

Specifications

Speakers : 12 cm (3.2 Ω) × 2, 2 cm × 2

Tuner section

Frequency ranges : FM 88 ~ 108 MHz RC-660 L/LB/LD/LS
65 ~ 73 MHz RC-660LE
MW 540 ~ 1600 kHz
LW 150 ~ 350 kHz
SW1 6 ~ 18 MHz

Antennas : Telescopic antenna for FM & SW
Ferrite core antenna for MW & LW

Tape recorder section

Track system : 4-Track 2-Channel stereo
Frequency response : 80 — 10,000 Hz
Wow & flutter : 0.19% (WRMS)
S/N ratio : 43 dB (Normal tape)
Rewind time : Approx. 120 sec. (C-60 cassette)
Fast forward time : Approx. 120 sec. (C-60 cassette)
Heads : Permalloy head for recording/ playback and erasure
Motor : Erectronic governor D.C. motor for capstan

Amplifier section

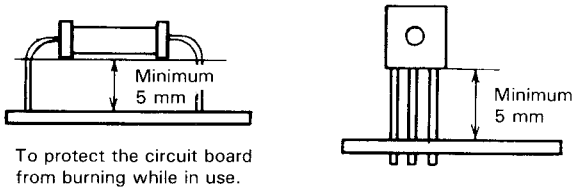
Power output : Max. 6 W (3 W + 3W) at 3.2 Ω
Input jacks : Mic × 2 (0.9 mV, 200 ~ 2 kΩ)
Output jacks : Headphone × 1
Other terminals : DIN Input 0.2 mV/kΩ impedance 8.2 kΩ
Output 500 mV/ — 5 dBs impedance 10 kΩ
Power supply : DC 9 V (6 "R20" batteries)
AC 240/220/110 V 50/60 Hz
Power consumption : 11 W (RC-660LB/LD/LS)
10 W (RC-660L)
Dimensions : 492(W) × 195(H) × 125(D) mm (19-3/8" × 7-3/4" × 5)
Weight : Approx. 2.7 kg (5.9 lbs) (without batteries)
Accessories : Power cord

Design and specifications subject to change without notice.

Safety Precautions

⚠ Safety mark

Safety is very important with this unit. When replacing the parts marked ⚠ , be sure to use only those designated parts. The designated resistors, diodes, transistors become hot in use. When replacing, be sure to secure them with a distance of more than 5 mm from the circuit board. In addition, they are banded together to avoid touching other wiring, recheck this point as well after repair.
The wiring of the primary side should be wound more than one and half times, then soldered.



To protect the circuit board from burning while in use.

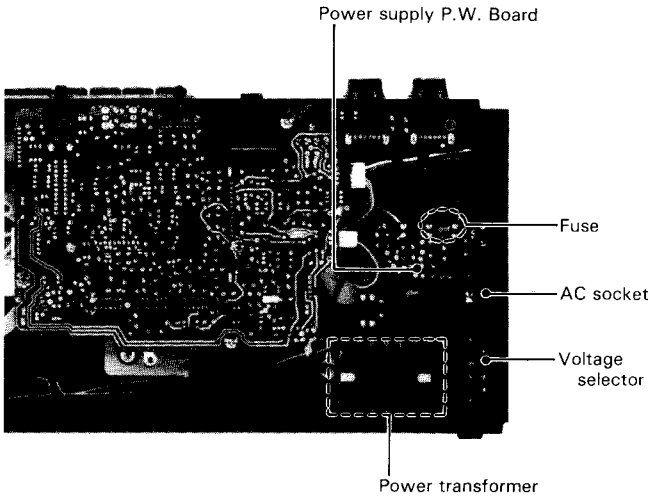


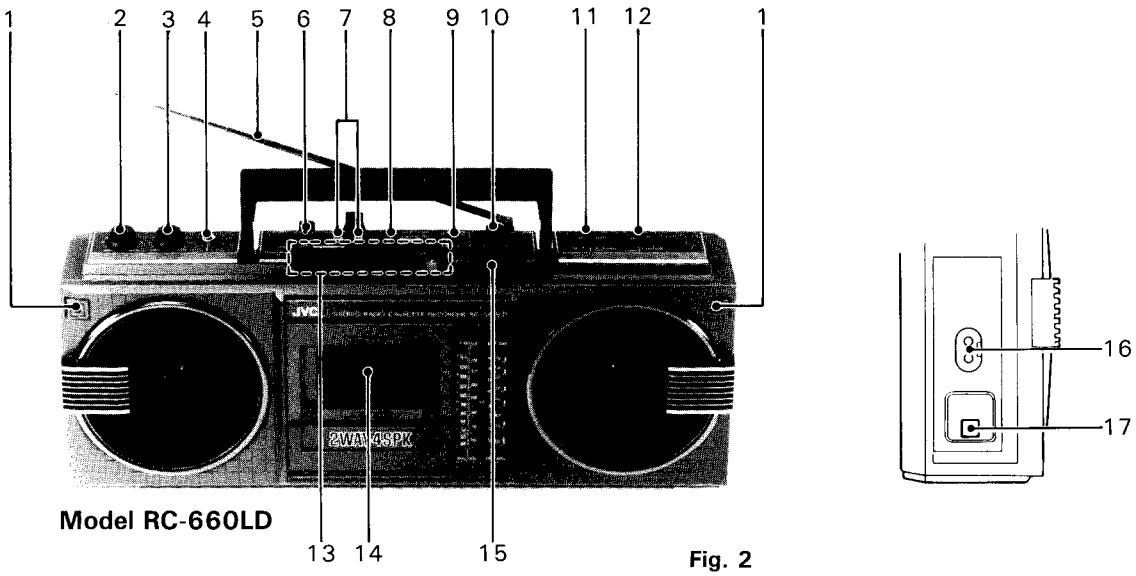
Fig. 1

Safety Component Parts List ⚠

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
T401	VTP48N2-90F	Power Transformer	RC-660L/LE/LS/LD	1
〃	VTP48N2-90FBS	〃	RC-660LB	1
——	QMP9017-009BS	Power Cord	RC-660LB	1
——	QMP3950-183	〃	RC-660L/LE/LD/LS	1
S104	QSS2325-107			
	QSS2325-107BS	〃	240/220/110 V RC-660LB	1
——	QMF51A2-R80	Fuse	T800mA 250 V	1
——	QMF51A2-R80BS	〃	T800mA 250V RC-660LB	1
J401	QMC0263-002U	AC. Socket		1
〃	QMC0263-002UBS	〃	RC-660LB	1
——	MM1-6A9MK	DC Motor	or MM1-5A9RKF	1
D401 ~ 404	11E1	Si Diode		4
D301	HZ6C3	Z. Diode		1
IC102	TA7232P	Integrated Circuit	Power Amp. I.C.	1
Q302	2SC1684(R,S)	Transistor		1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
FR301	QRH141J-100	Fusible Resistor	10 Ω 1/4 W	1
R303,304	QRD161J-151	Carbon Resistor	150 Ω 1/6 W	2
R306	QRD121J-1R0	〃	1 Ω 1/2 W RC-660L/LB	1
R308	〃 -1R0	〃	1 Ω 1/2 W RC-660L/LD/LS	1
R117,217	QRH141J-4R7	Fusible Resistor	4.7 Ω 1/4 W RC-660L/LB	1
R123,223	QRH141J-4R7	〃	4.7 Ω 〃 RC-660LD/LE/LS	2
R9,R11	QRD161J-470	Carbon Resistor	47 Ω 1/6 W	2
R10	QRD161J-101	〃	100 Ω 1/6 W	1
C306	QET41CR-228	E. Capacitor	2200 μF 16 V RC-660L/LB	1
C308	QET41CR-228	〃	2200 μF 16 V RC-660LD/LE/LS	1

Location of Controls



Model RC-660LD

Fig. 2

1. Built-in microphones
2. VOLUME control
3. TONE control
4. PHONES jack
5. Telescopic antenna
6. STEREO WIDE/BEAT CUT switch
7. MIC jacks
8. FUNCTION switch
9. DIN jack (Rec/PB)
10. FINE TUNE knob
11. BAND switch
12. FM MODE switch
13. Cassette operation buttons
    - ❚❚ PAUSE button
    - ■ STOP/EJECT button
    - ◀◀ FF button
    - ▶▶ REW button
    - ◀ PLAY button
    - ○ REC button
14. Cassette holder
15. Tuning knob
16. AC INPUT jack
17. VOLTAGE SELECTOR

Location of Main Parts

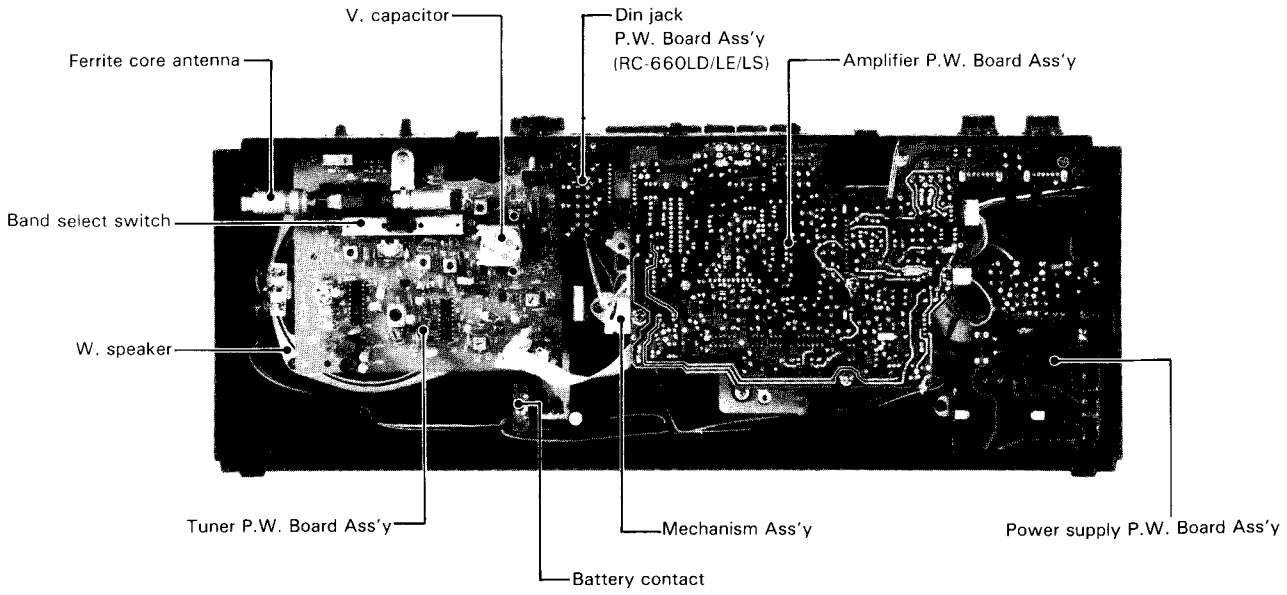


Fig. 3

Removal of the Main Parts

1. Rear Cabinet

1) Remove the 8 screws (1) fastening the rear cabinet.
2) Remove the screw (2) fastening the terescopic antenna. (need not the rear cabinet)
3) Pull out the receptacle wire on amplifier P.W. Board.

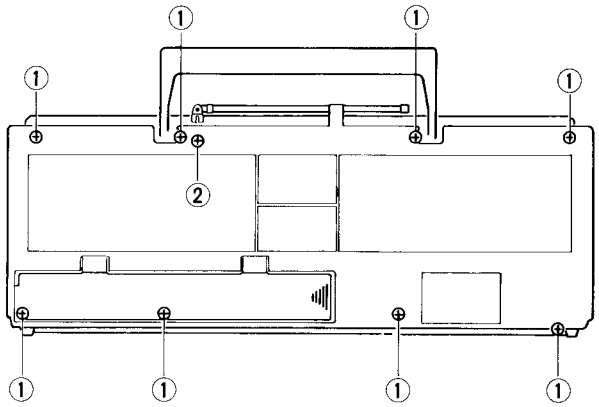


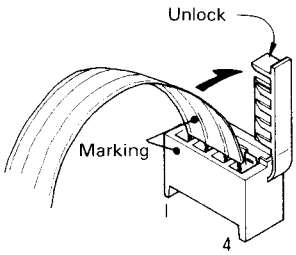
Fig. 4

2. DIN Jack

Pull out the DIN jack (10) Ass'y from F. cabinet.

3. Tuner P.W. Board

1) Pull out the fine tuning knob.
2) Remove the parallel wire from the tuner P.W. Board.



When removing the parallel wire, it's convenient for connecting then again to do marking both on the wire side and socket side.

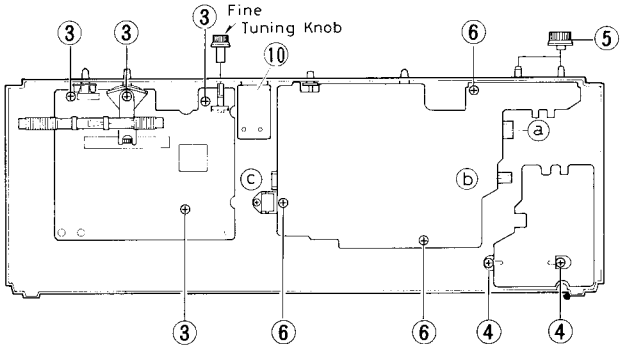


Fig. 5

3) Remove the 4 screws (3) fastening the tuner P.W. Board.

4. Power supply P.W. Board Assembly

Remove 2 screws (4) fastening the power transformer.

5. Amplifier P.W. Board Assembly

1) Pull out 2 knobs (5) (Volume and Tone).
2) Remove 3 screws (6).
3) Remove 3 connectors (a) b and (c).

6. Mechanism Assembly

Remove 4 screws (7) fastening the mechanism assembly.

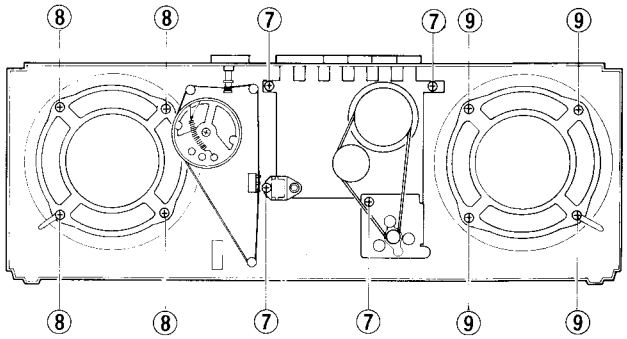


Fig. 6

7. Speaker (See Fig. 6)

1) Remove 4 screws (8) fastening the speaker of Left side. (R ch speaker)
2) Remove 4 screws (9) fastening the speaker of Right side. (L ch speaker)

Note:

Mechanism parts section is the same as those of the service manual RC-770L/LB/LD/LS (No. 1531)
Please refer to the service manual of RC-770L/LB/LD/LS (No. 1531)

How to Engage Dial Cord

1. Turn the dial drum fully clockwise (to the highest frequency).
2. Use Kevlar Cord (620 mm long and 0.4 mm diameter).
3. Install the string in the sequence of the numbers.

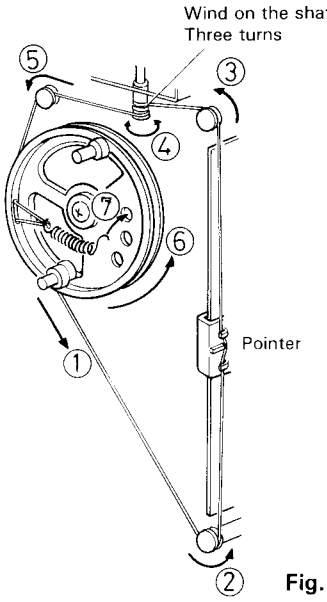
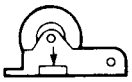
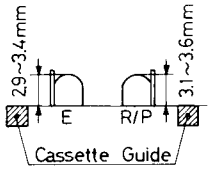
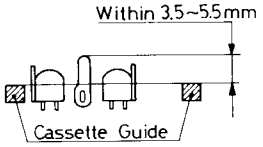


Fig. 7

Main Adjustment

[I] Adjustment of Cassette Mechanism

Check the following items after cassette mechanism parts are replaced.

Item	Requirements	Test equipment	Test tape
1. Source voltage	Rated voltage: 9.0 V DC Motor operating voltage range: 7—10 V DC	Regulated power supply	—
2. Tape speed	4.8 cm/sec (3,000 Hz) ..... 2,060 ~ 3,090 Hz Deviation within 60 Hz	Frequency counter (digital counter)	VTT-656A
3. Wow & flutter	Less than 0.35% (RMS)	Wow meter	VTT-656A
4. Take-up torque	PLAY 35—75 g.cm FF 60—200 g.cm REW 60—200 g.cm	During FF and rewind, the idlers, reels and flywheel should not slip against each other when the reels are locked.	—
5. Current consumption (of motor alone)	PLAY 150 mA or less FF 250 mA or less REW 250 mA or less	DC ammeter	C-60 (take-up torque should be normal when tape is used.)
6. Pinch roller pressure	375 ~ 475 g	Tension gauge Pull the pinch roller perpendicularly and read the gauge when the pinch roller just stops. 	—
7. Head position during PLAY and RECORD		During PLAY (RECORD) the dimensional requirements given here must be met, and the heads must not contact the cassette case.	Any cassette tape
8. Auto-stop operation and extent movement	40 ~ 70 g 	Tension gauge pull the Auto stop lever perpendicularly and read the gauge when the mechanism just Auto stop.	Any cassette tape

[II] Electrical Circuit Adjustments

Electrical Adjustment of Location

(Amplifier)

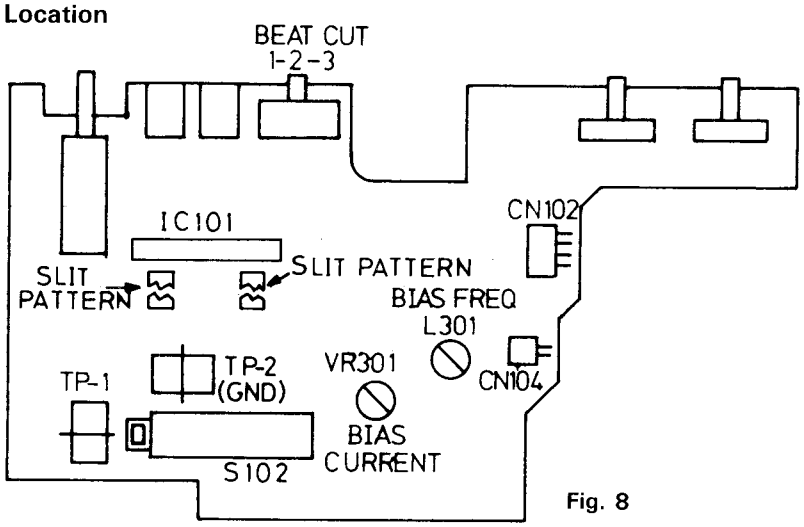


Fig. 8

Model RC-660 L/LB/LD/LE/LS			Cassette section	
Source voltage		DC : 9 V, AC : 240/220/110 V	Load	0 dBs mW (0.775 V)/3.2 Ω
Step	**Item**	**Adjustment method**		
1	Measurement Confirmation Method	Standard blank tape for measurement will be the following: Normal tape LNC-60.		
2	Speed, Wow & Flutter	When the wow & flutter is measured by the test tape VTT-656 (3,000 Hz) or another tape of the same kind, the value of the wow & flutter should be within __%. The speed value should be within +15% to −15% 3020 Hz. Measurement is RMS.		
3	Recording/Playback Frequency Characteristics	Signal of −20 dB against the standard input and the value when 1,000 Hz and the frequencies listed below are recorded and played back. Normal tape 1000 Hz/125 Hz: 0 dB ±4 dB 1000 Hz/6.3 kHz: +1 dB ± dB		
4	Recording/Playback Distortion Rate Measurement	Record and playback the fixed input signals of 1,000 Hz and measure the distortion rate. The value should be as follows: Normal tape within 8%.		
5	Playback Output Measurement (9 V impressed to CN-104) (7 V measured to CN-102)	Using the test tape VTT-663 (1,000 Hz) or another tape of the same kind, the playback output value should be as follows: 10% > 2100 mW (2.59 V/3.2 Ω) Max. output> 2500 mW (2.83 V/3.2 Ω)		
6	Playback Frequency Characteristics	Using the test tape VTT-673N or another tape of the same kind, each value is as follows when 1,000 Hz is changed to 0 dB: 1000 Hz/125 Hz: 0 dB±3 dB 1000 Hz/ 8 Hz: 0 dB±3 dB		
7	Playback Level Confirmation	Playback the test tape and confirm that the level difference between the C-R is within 3 dB when an output of 0 dBs/3.2 Ω is obtained with CN-102. If it does not fit within the standards, cut out the lightning pattern and fit it into the pattern. Pattern L (A) Slit Pattern L Short → L channel approximately 2 dB up. Pattern R (B) Slit Pattern R Short → R channel approximately 2 dB up.		
8	Wide Circuit Operation Confirmation	When you playback the signals of the left and right channels, the signals should be played back from the opposite channel from in the WIDE position. (Example: When the right channel signal is received with a stereo modulation with an output of 60 dB and 30% modulation of FM 1 kHz:		

	BEAT CUT 1·2	BEAT CUT3/WIDE
Rch	0 dB	+5 dB
Lch		−2 dB

Note : If some do not fit in within the standards during recording/playback, frequency characteristics and recording/playback distortion rate measurement, fit in adjusting the UR-BO.
Bias electric current increase → high range rises during recording/playback
Distortion rate worsens.
Bias electric current decreases → high range lowers during recording/playback
Distortion rate improves

[III] Tuner Alignment

The model RC-660L/LB/LD/LE/LS is the same as the model RC-770L/LB/LD/LS (No. 1531) except the FM RF Alignment. Please refer to the service manual for the model RC-770L/LB/LD/LS (No. 1531)

FM RF Alignment:

RC-660L/LB/LS

	Band Select Switch Position	Sort of Antenna to be attached to SSG	Frequency of SSG	Variable Capacitor Position	Aligning Position
1	FM	Dummy Antenna	87.5 MHz	Max. capacity	L2
2			109.0 MHz	Min. capacity	TC-2
3			Adjust the above aligning position (L2 & TC-2) repeatedly so that the tuner can be received above frequency range (band width).		
4			90 MHz	to be received 90 MHz	L1
5			106 MHz	to be received 106 MHz	TC-1
6			Adjust the above aligning position (L1 & TC-1) repeatedly so that the tuner can be obtained the best sensitivity.		

RC-660LD

	Band Select Switch Position	Sort of Antenna to be attached to SSG	Frequency of SSG	Variable Capacitor Position	Aligning Position
1	FM	Dummy Antenna	87.5±0.05 MHz	Max. capacity	L2
2			108.3±0.07 MHz	Min. capacity	TC-2
3			Ajust the above aligning position (L2 & TC-2) repeatedly so that the tuner can be received above frequency range (band width).		
4			90 MHz	to be received 90 MHz	L1
5			106 MHz	to be received 106 MHz	TC-1
6			Adjust the above aligning position (L1 & TC-1) repeatedly so that the tuner can be obtained the best sensitivity.		

RC-660LE

	Band Select Switch Position	Sort of Antenna to be attached to SSG	Frequency of SSG	Variable Capacitor Position	Aligning Position
1	FM	Dummy Antenna	64 MHz	Max. capacity	L2
2			74 MHz	Min. capacity	TC-2
3			Adjust the above aligning position (L2 & TC-2) repeatedly so that the tuner can be received above frequency range (band width).		
4			65 MHz	to be received 65 MHz	L1
5			73 MHz	to be received 73 MHz	TC-1
6			Adjust the above aligning position (L1 & TC-1) repeatedly so that the tuner can be obtained the best sensitivity.		

Part Arrangement of Alignment

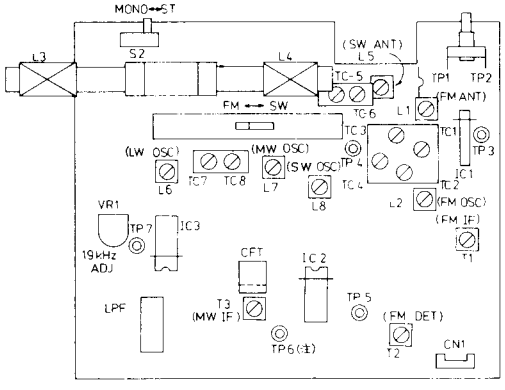
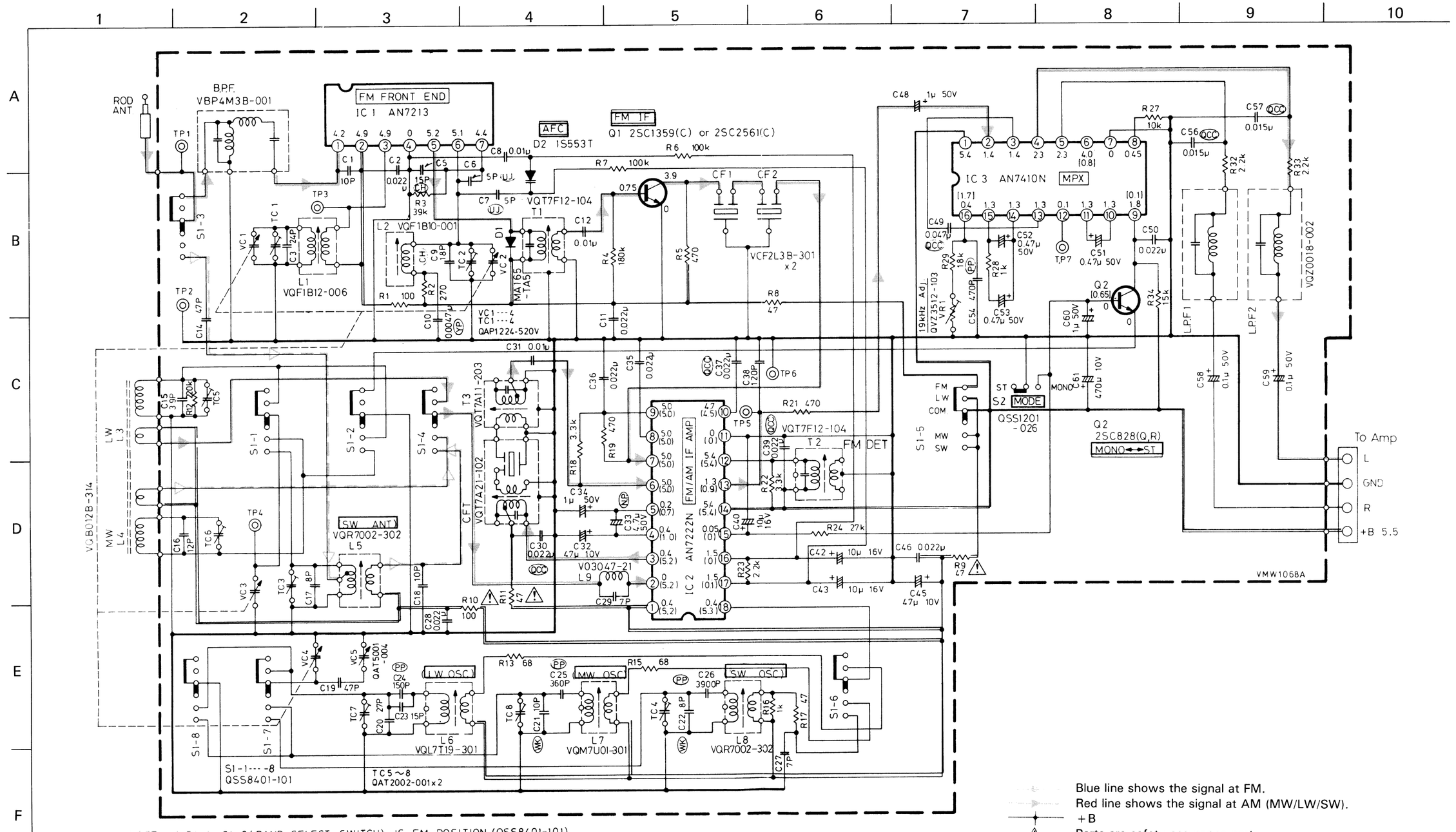


Fig. 9

Standard Schematic Diagram of RC-660L/LB (Tuner)

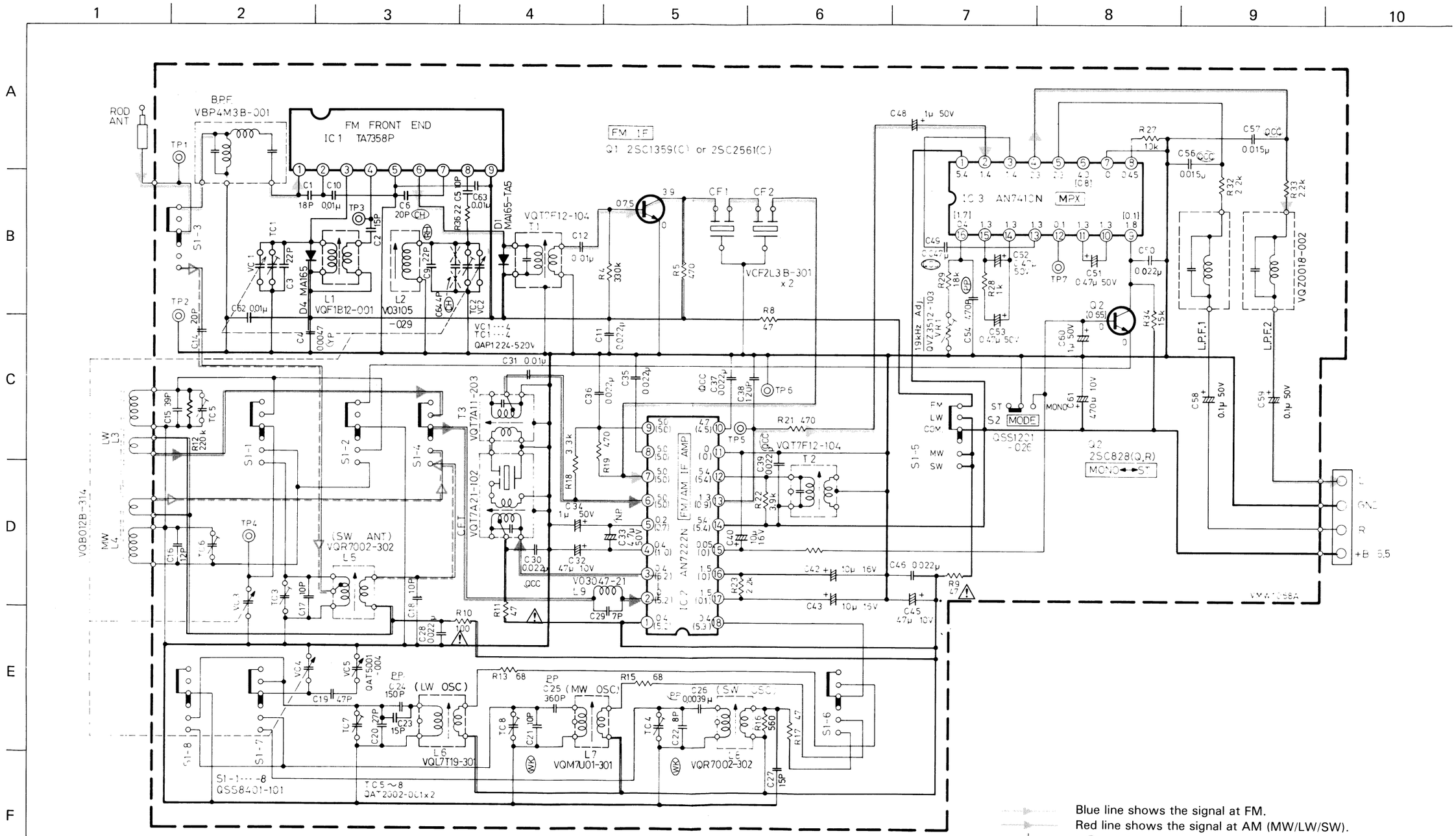


NOTE
1. S1-1~S1-8 (BAND SELECT SWITCH) IS FM POSITION. (QSS8401-101)
2. S2 (MONAURAL-STEREO SWITCH) IS STEREO POSITION (QSS1201-026)
3. VOLTAGES ARE MEASURED WITH NO SIGNAL USING ELECTRONIC VOLT METER AT FM POSITION,
( ) VALUES AT AM (LW/MW/SW) POSITION.
4. [ ] VALUES AT FM POSITION WHEN 60dBμV STEREO SIGNAL IS SUPPLIED TO ANTENNA TERMINAL (TP1,2).
5. LAST NO. R34, C61, L9, Q2
BLANK NO. R14, 20, 25, 26, 30, 31
C4, 13, 41, 44, 47, 55
6. THE RATING OF ALL RESISTOR IS 1/6W

Blue line shows the signal at FM.
Red line shows the signal at AM (MW/LW/SW).
+B
⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Fig. 10

Standard Schematic Diagram of RC-660LD (Tuner)

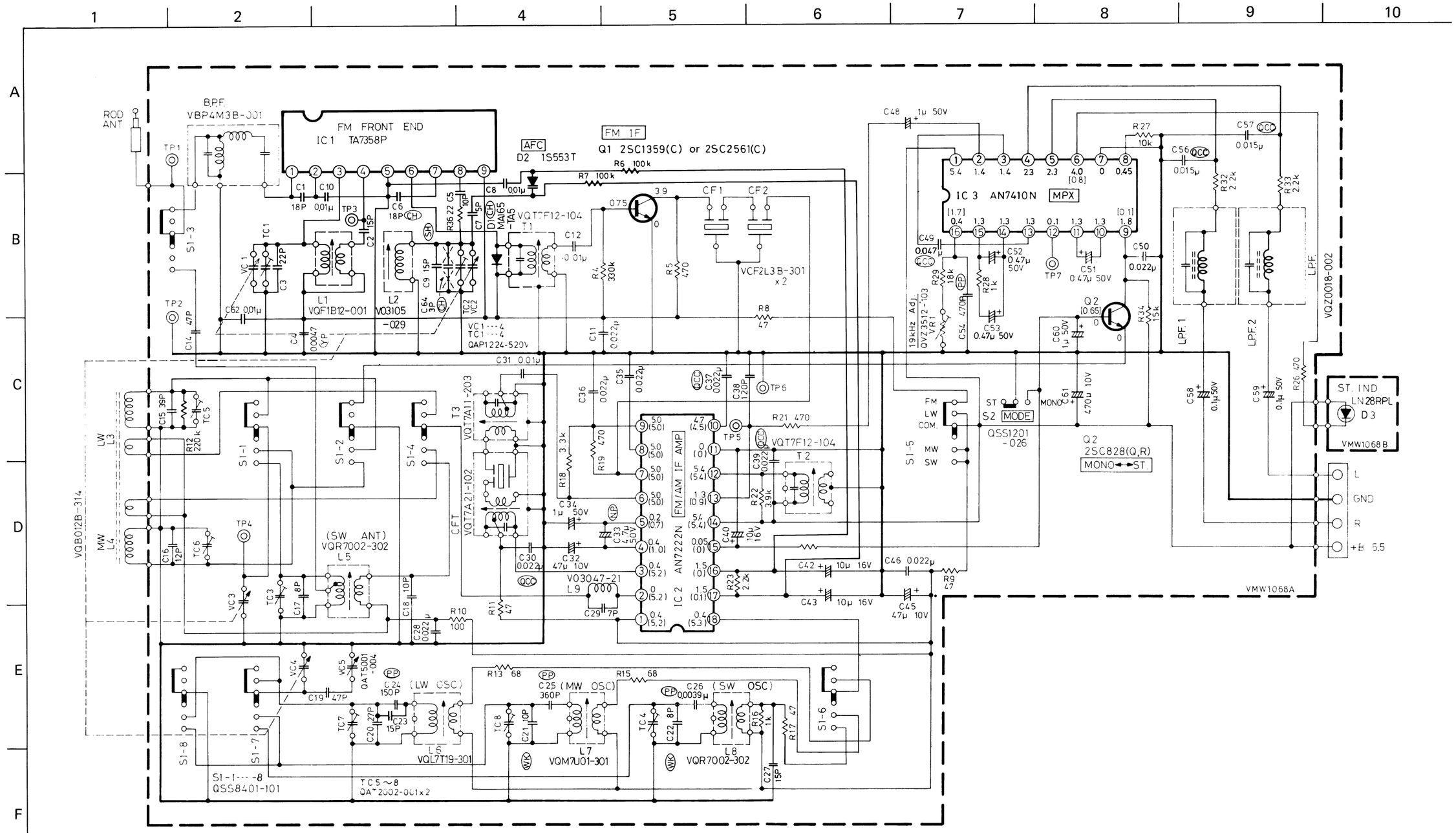


Blue line shows the signal at FM.
Red line shows the signal at AM (MW/LW/SW).
+B
⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

NOTE:
1. **S1-1** ~ S1-8 (BAND SELECT SWITCH) IS FM POSITION (QSS8401-101)
2. S2 (MONAURAL-STEREO SWITCH) IS STEREO POSITION (QSS1201-026)
3. VOLTAGES ARE MEASURED WITH NO SIGNAL USING ELECTRONIC VOLT METER AT FM POSITION.
   ( ) VALUES AT AM (LW/MW/SW) POSITION.
4. [ ] VALUES AT FM POSITION WHEN 60 dBμV STEREO SIGNAL IS SUPPLIED TO ANTENNA TERMINAL (TP1, 2).
5. LAST NO. R34, C64, L9, Q2
   BLANK NO. R1, 2, 3, 6, 7, 20, 25, 30, 31
5. BLANK NO. C7, 8, 23, 41, 44, 47, 55
6. THE RATING OF ALL RESISTOR IS 1/6 W.

Fig. 11

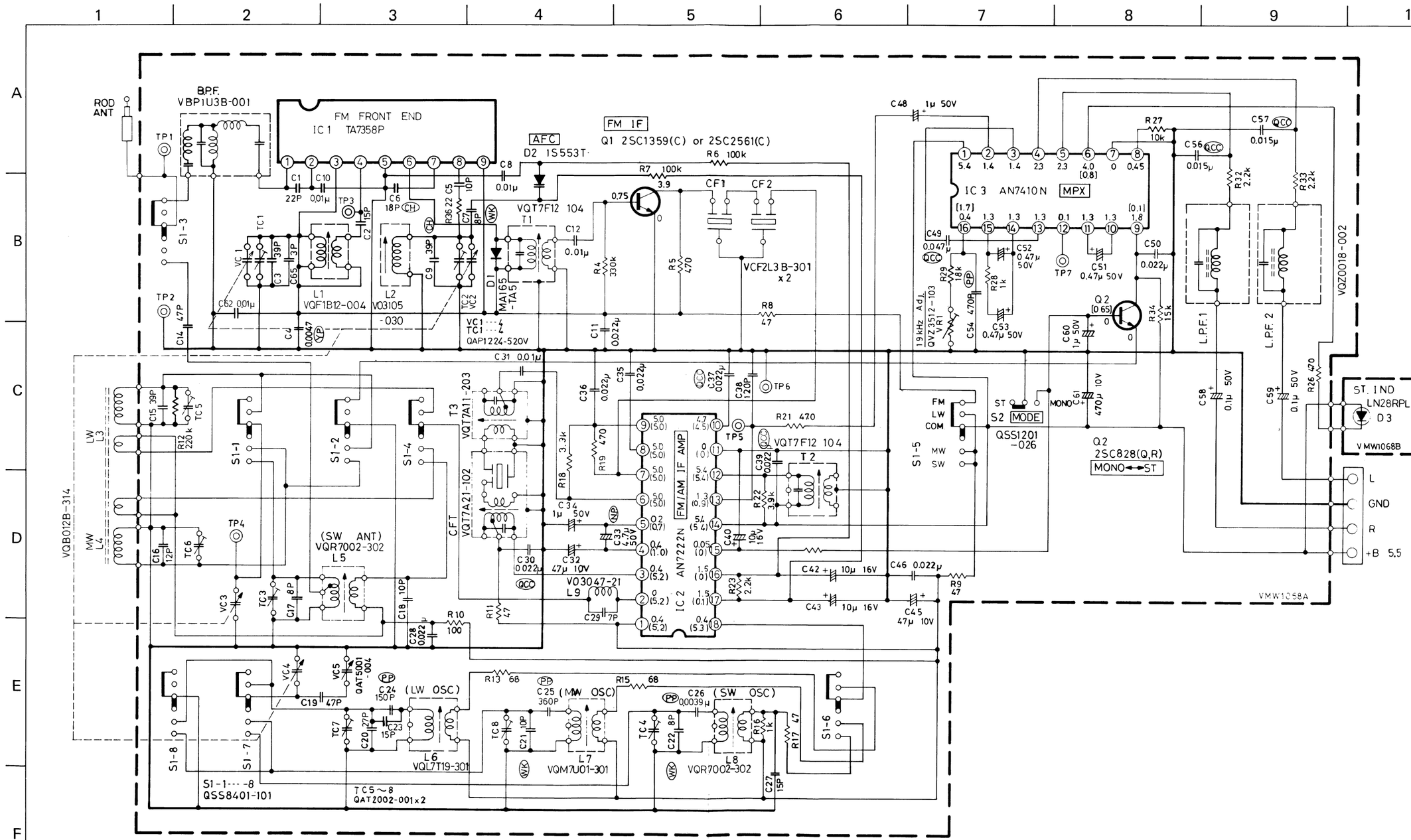
Standard Schematic Diagram of RC-660LE (Tuner)



NOTE:
1. S1-1 ~ S1-8 (BAND SELECT SWITCH) IS FM POSITION (QSS8401-101)
2. S2 (MONAURAL-STEREO SWITCH) IS STEREO POSITION (QSS1201-026)
3. VOLTAGES ARE MEASURED WITH NO SIGNAL USING ELECTRONIC VOLT METER AT FM POSITION.
   ( ) VALUES AT AM (LW/MW/SW) POSITION.
4. [ ] VALUES AT FM POSITION WHEN 60 dBμV STEREO SIGNAL IS SUPPLIED TO ANTENNA TERMINAL (TP1).
5. LAST NO. R34, C64, L9, Q2
   BLANK NO. R1, 2, 3, 20, 25, 30, 31
   C23, 41, 44, 47, 55, 63
6. THE RATING OF ALL RESISTOR IS 1/6 W.

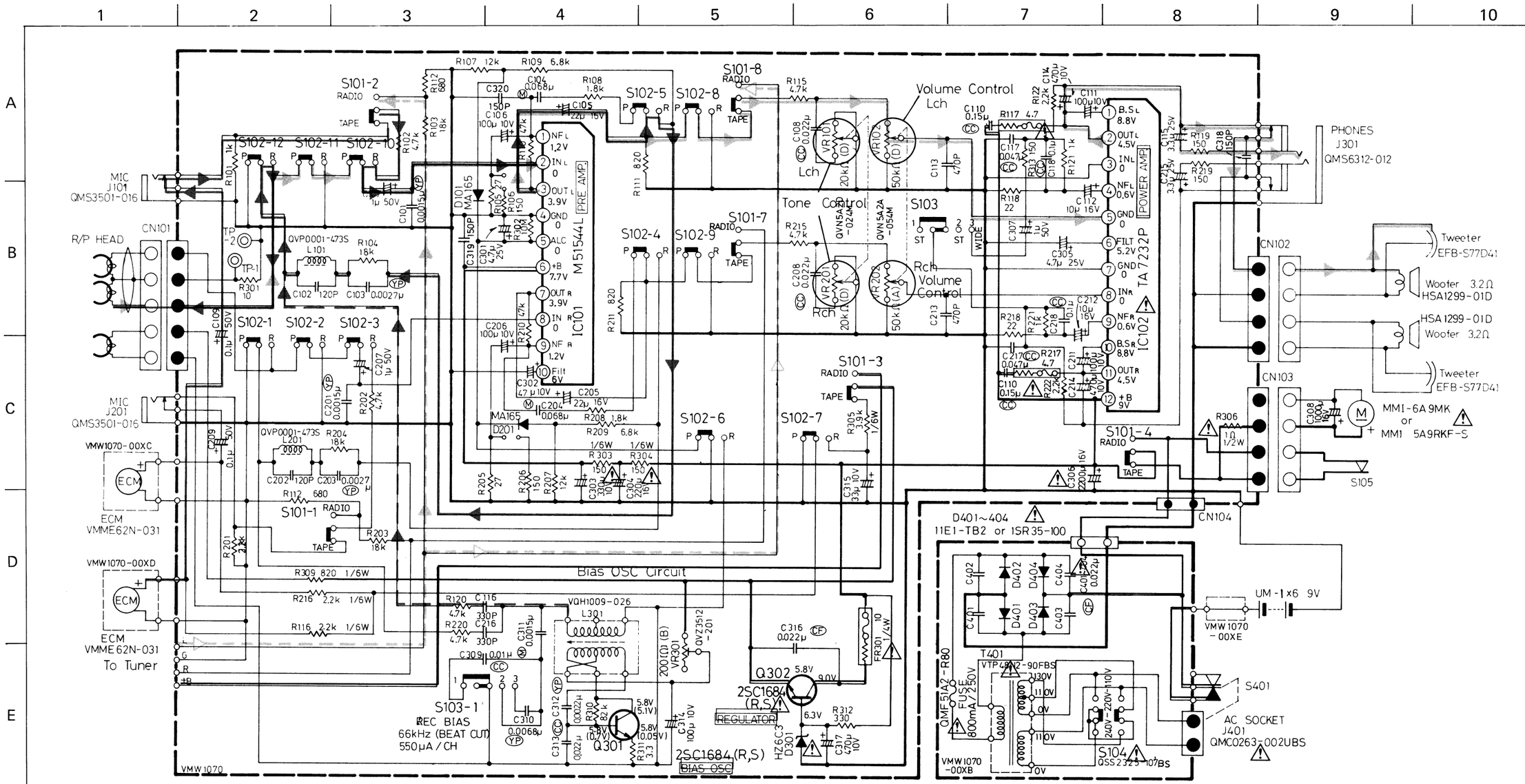
Fig. 12

Standard Schematic Diagram of RC-660LS (Tuner)



NOTE:
1. S1-1 ~ S1-8 (BAND SELECT SWITCH) IS FM POSITION (QSS8401-101)
2. S2 (MONAURAL-STEREO SWITCH) IS STEREO POSITION (QSS1201-026)
3. VOLTAGES ARE MEASURED WITH NO SIGNAL USING ELECTRONIC VOLT METER AT FM POSITION.
   ( ) VALUES AT AM (LW/MW/SW) POSITION.
4. [ ] VALUES AT FM POSITION WHEN 60 dBμV STEREO SIGNAL IS SUPPLIED TO ANTENNA TERMINAL (TP1).
5. LAST NO. R34, C65, L9, Q2
   BLANK NO. R1, 2, 3, 20, 25, 30, 31
   C23, 41, 44, 47, 55, 63, 64
6. THE RATING OF ALL RESISTOR IS 1/6 W.

Stnadard Schematic Diagram of RC-660L/LB (Amplifier)



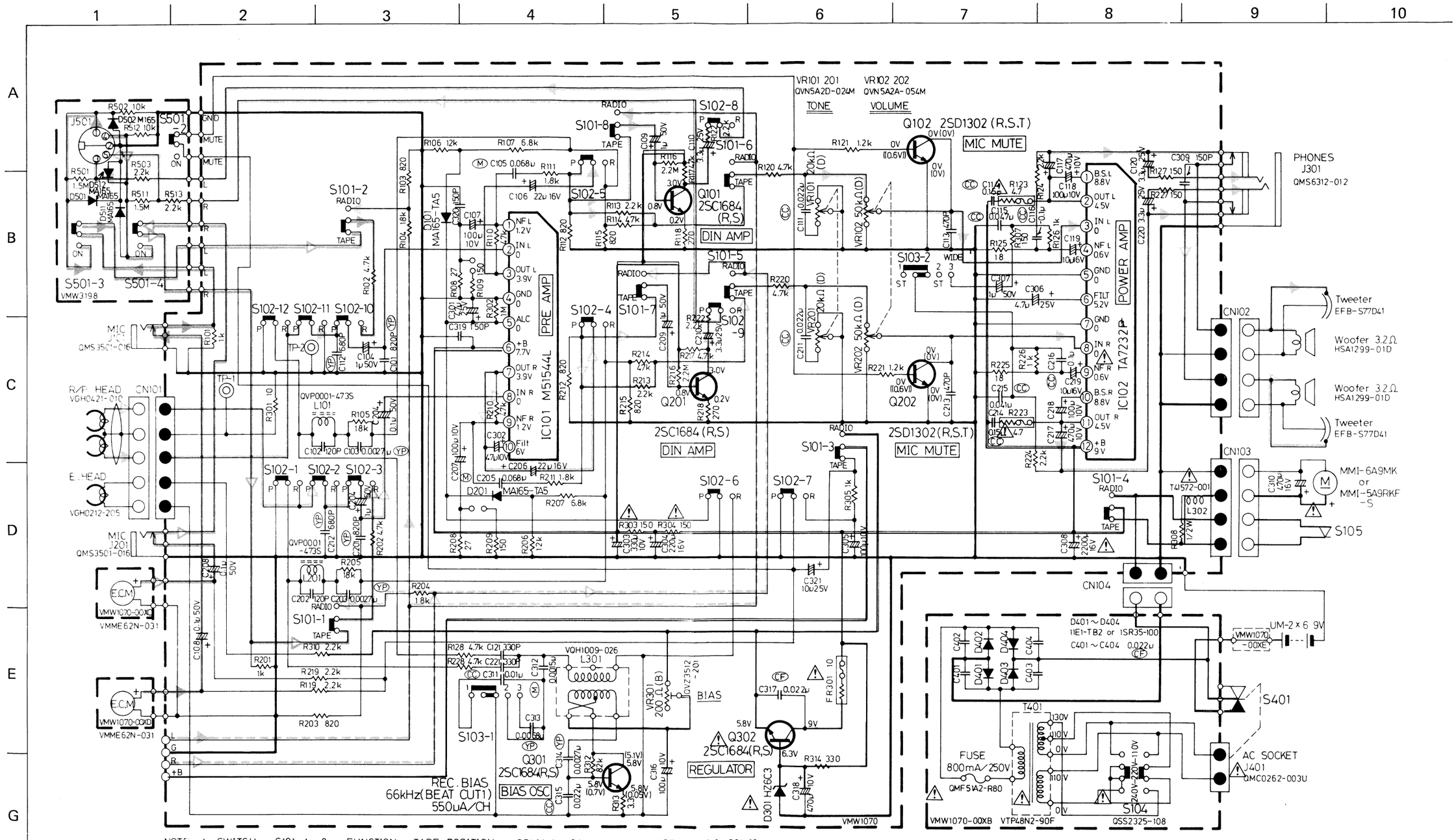
NOTE
1. SWITCH S101-1……8 FUNCTION : TAPE POSITION …… QSL8210-104
2. SWITCH S102-1……12 REC/PLAY : PLAY POSITION …… QSSC201-106
3. SWITCH S103-1……4 BEATCUT WIDE : BEATCUT 1 POSITION …… QSS4301-034
4. SWITCH S104 VOLTAGE SELECT : 220V POSITION …… QSS2325-108
5. SWITCH S105 MOTOR : ON POSITION …… LSA1120C01T
6. VOLTAGES ARE MEASURED WITH NO SIGNAL USING ELECTRIC VOLT METER. (REC( )). REFERENCE POINT IS CN104
7. AT L
   VTP48N2-90FBS → VTP48N2-90F
   QMC0263-002UBS → QMC0263-002U
   QSS2325-107BS → QSS2325-107

LAST NO.	BLANK NO.
C118, 218	
C320	
C404	R113, 213, 114, 214
R122, 222	R307, 308, 314
R313	

Blue line shows the signal at playback.
Red line shows the signal at recording.
+B circuit
⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Fig. 14

Standard Schematic Diagram of RC-660LD/LE/LS (Amplifier)



NOTE
1. SWITCH S101-1---8 FUNCTION : TAPE POSITION----QSL8210-104
2. SWITCH S102-1---12 REC/PLAY : PLAY POSITION----QSS4301-034
3. SWITCH S103-1---4 BEATCUT WIDE : BEATCUT 1 POSITION----QSS4301-034
4. SWITCH S104 VOLTAGE SELECT : 220V POSITION----QSS2325-108
5. SWITCH S105 MOTOR : ON POSITION ----------LSA1120C01T
6. SWITCH S501-1---4 DIN : OFF POSITION----QSP4210-061
7. VOLTAGES ARE MEASURED WITH NO SIGNAL USING ELECTRIC VOLT METAR. (REC( )) (REC & DIN OFF(( )) REFERENCE POINT IS CN104.

Blue line shows the signal at playback.
Red line shows the signal at recording.
+B circuit
⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Fig. 15

Block Diagram

Tuner section is the same as those of the service manual RC-770L/LB/LD/LS (No. 1351). Please refer to the service manual of RC-770L/LB/LD/LS (No. 1351).

Playback system

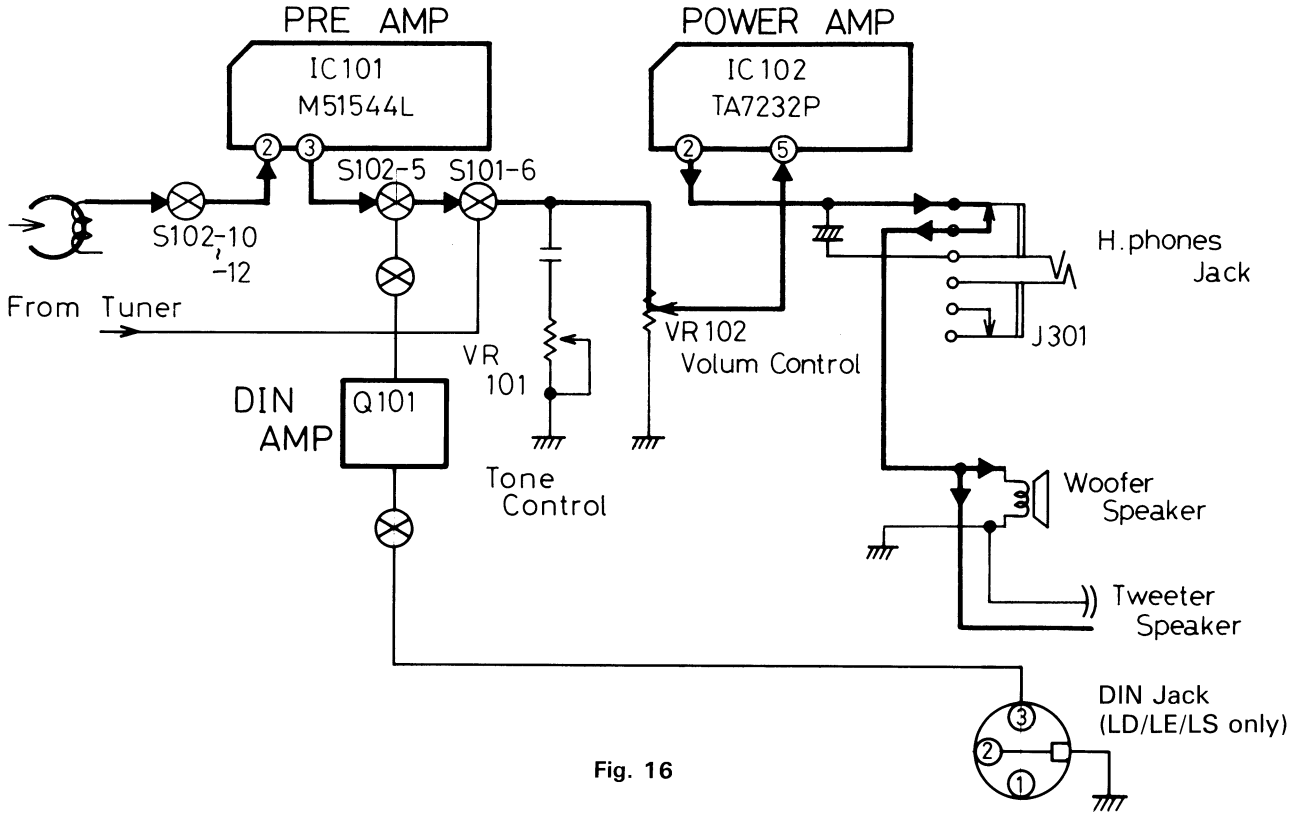


Fig. 16

Record system

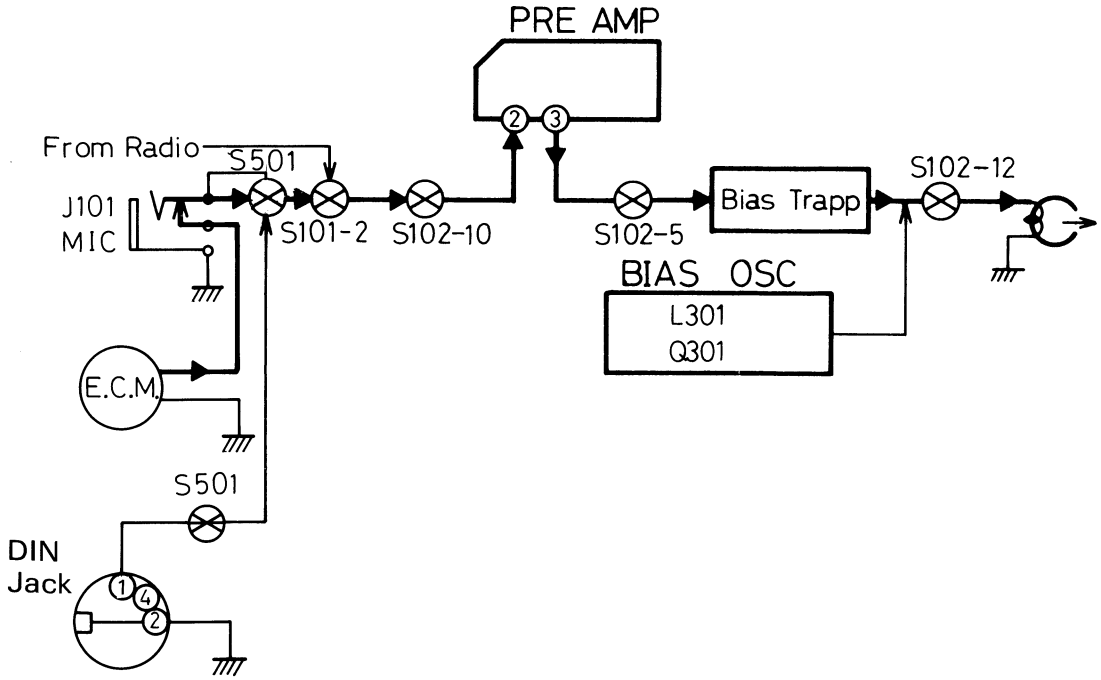


Fig. 17

Tuner P.W. Board Parts and Parts List

RC-660L/LB/LS

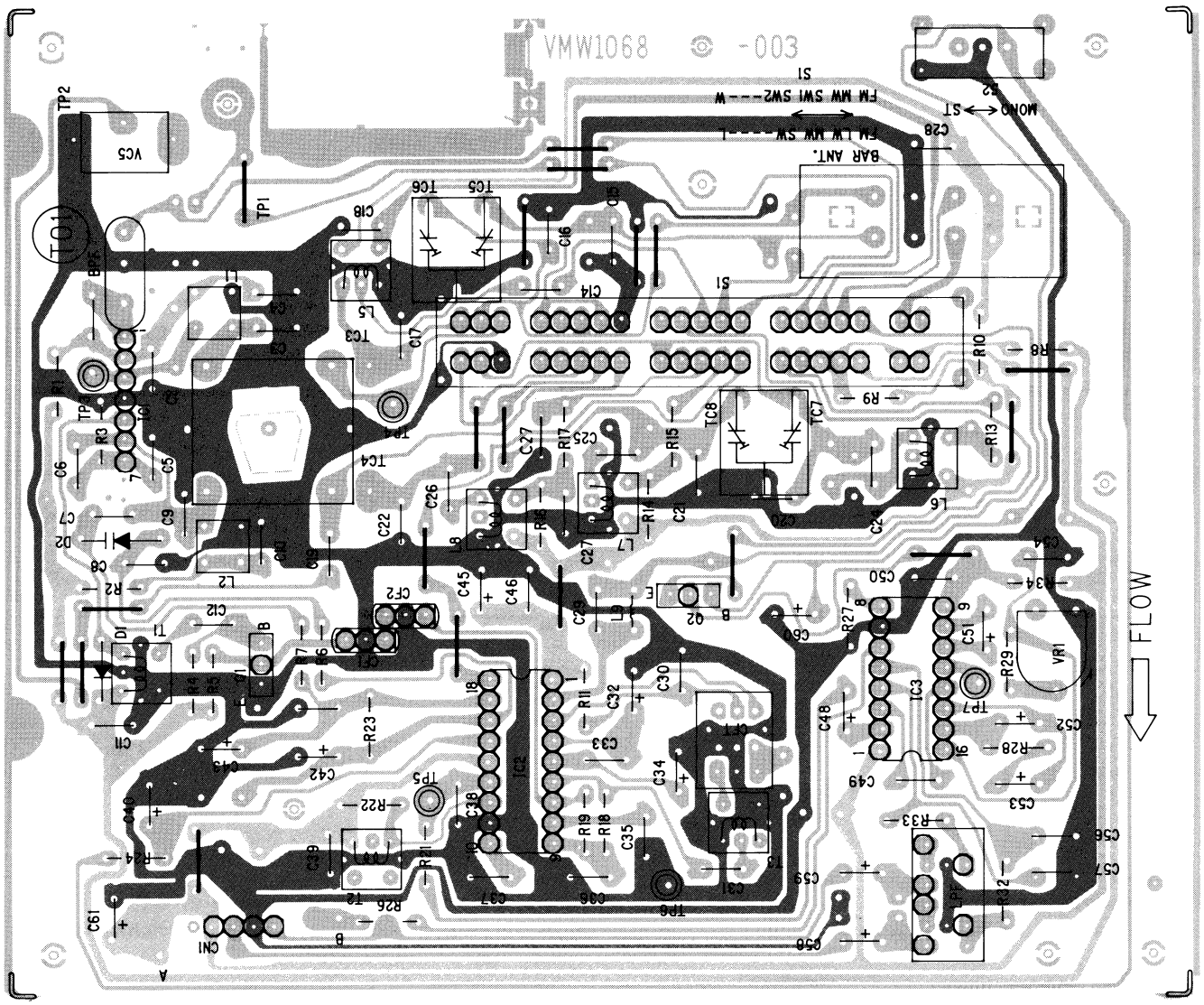


Fig. 18

RC-660L/LB/LS Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
VMW1068-003A Tuner P.W. Board A'ssy				
VC-1 ~ 4 TC-1 ~ 4	QAP1224-520V	V. Capacitor		
TC5 ~ 8	QAT2002-001	T. Capacitor		
VC5	QAT5001-004	M.V. Capacitor		
VR1	QVZ3512-103	V. Resistor		
L1	VQF1B12-007	RF Coil	(FM)	
L2	VQF1B10-001	OSC Coil	〃	
L5	VQR7002-302	RF Coil	(SW3)	
L6	VQL7T19-301	OSC Coil	(LW)	
L7	VQM7U01	〃	(MW)	
L8	VQR7002-302	〃	(SW)	
L9	V03047-21	Coil		
L3,4	VQB012B-314	Bar Ant. Ass'y		
T1	VQT7F12-104	IFT		
T2	〃 -104	〃		
T3	VQT7A11-203	〃		
CF1,2	VCF2L3B-301	C. Filter		
CFT	VQT7A21-102	C.F.T.		

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
BPF	VBP4M3B-001	Band Pass Filter		
LPF1,2	VQZ0018-002	Low Pass Filter		
IC1	AN7213	I.C.		
IC2	AN7222N	〃		
IC3	AN7410N	〃		
Q1	2SC1359(C)TA	Si. Transistor		
Q2	2SC828(Q,R)TA	〃		
D1	MA165	Si. Diode		
D2	1S553T	Vari Cap		
S1-1 ~ 8	QSS8401-101	Slide Switch		
S2	QSS1201-026	〃		
R1,10	QRD161J-101	C. Resistor	100 Ω 1/6W	2
R2	〃 -271	〃	270 Ω 〃	1
R3	〃 -393	〃	39 kΩ 〃	1
R4	〃 -184	〃	180 kΩ 〃	1
R5,19,21	〃 -471	〃	470 Ω 〃	3
R6,7	〃 -104	〃	100 kΩ 〃	2
R8,9,11 17	〃 -470	〃	47 Ω 〃	4

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
R12	QRD161J-224	C. Resistor	220 Ω 1/6W	1
R13,15	" -680	"	68 Ω "	2
R16,28	" -102	"	1 kΩ "	2
R18,22	" -332	"	3.3 kΩ "	2
R23,32,33	" -222	"	2.2 kΩ "	3
R24	" -273	"	27 kΩ "	1
R27	" -103	"	10 kΩ "	1
R29	" -183	"	18 kΩ "	1
R34	" -153	"	15 kΩ "	1
C1	QCS11HJ-100	C. Capacitor		
C2	QCF11HP-223	"	0.022 μF 50 V	
C3	QCS11HJ-240	"	24 pF "	
C5	QCT05CH-150	"	15 pF "	
C6	QCT05UJ-5R0	"	5 pF "	
C7	QCT05UJ-5R0	"	5 pF "	
C8	QCF11HP-103	"	0.01 μF "	
C9	QCT05CH-150	"	15 pF 16 V	
C10	QCY11HK-472	"	0.0047μF 50 V	
C11	QCF11HP-223	"	0.022 μF "	
C12	" -103	"	0.01 μF "	
C14	QCS11HJ-470	"	47 pF "	
C15	" -390	"	39 pF "	
C16	" -120	"	12 pF "	
C17	" -100	"	10 pF "	
C18	" -100	"	1 pF "	
C19	" -470	"	47 pF "	
C20	QCS11HJ-270	"	27 pF "	
C21	QCT05WK-100	"	10 pF "	
C22	QCT05WK-8R0	"	8 pF "	
C23	QCS11HJ-150	"	15 pF "	
C24	QFP32AJ-150	"	150 pF 10 V	
C25	" -361	"	360 μF "	
C26	" -392	"	0.0039 μF "	
C27	QCS11HJ-150	C. Capacitor	15 pF 50 V	
C28	QCF11HP-223	"	0.022 μF "	
C29	QCS11HJ-7R0	"	7 pF "	
C30	QCC11EM-223	"	0.022 μF 25 V	
C31	QCF11HP-103	"	0.01 μF 50 V	
C32	QET41AR-476	E. Capacitor	47 μF 10 V	
C33	QEN41EM-475	N.P. Capacitor	4.7 μF 25 V	
C34	QET41HR-105	E. Capacitor	1 50 V	
C35	QCF11HP-223	C. Capacitor	0.022 μF "	
C36	" -223	"	0.022 μF "	
C37	QCC11EM-223	"	0.022 μF "	
C38	QCS11HJ-121	"	120 pF "	
C39	QCC11EM-223	"	0.022 μF 25 V	
C40	QET41ER-106	E. Capacitor	10 μF "	
C42	" -106	"	10 μF "	
C45	QET41AR-476	"	47 μF 10 V	
C46	QCF11HP-223	"	0.022 μF 50 V	
C48	QET41HR-105	"	1 μF "	
C49	QCC11EM-473	C. Capacitor	0.047 μF 25 V	
C50	QCF11HP-223	"	0.022 μF "	
C51	QET41HR-474	E. Capacitor	0.47μF "	
C52	" -474	"	0.47 μF "	
C53	" -474	"	0.47 μF "	
C54	QFP42AJ-471	P.P. Capacitor	470 pF 10 V	2
C56,57	QCC11EM-153	C. Capacitor		2
C58,59	QET41HR-104	E. Capacitor	0.1 μF 50 V	2
C60	" -105	"	1 μF "	1
C61	QETC1AM-477	"	470 μF 10 V	1
C63	QCT05CH-3R0	"		1
CN1	E04365-004	Connector		1
	VMZ0015-001	Post Pin		4

RC-660LD/LE

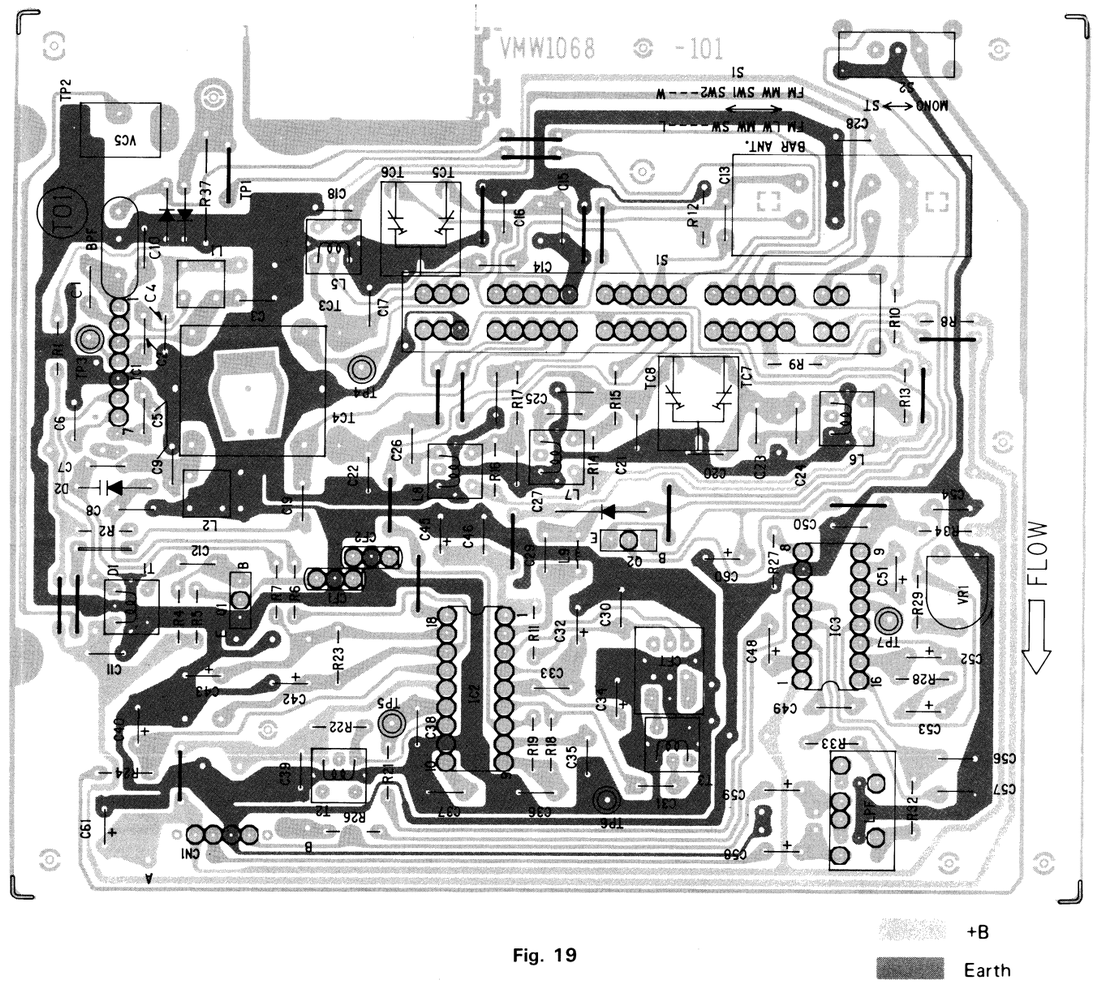


Fig. 19

RC-660LD/LE/LS Tuner P.W. Board Parts List

Refer to RC-660LD/LS/LE Parts List when checking the other parts.

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
L1	VQF1B12-004	RF Coil	(FM) RC-660LE	1
	" -001	"	(FM) RC-660LD/LS	1
L2	V03105-030	OSC Coil	(FM) RC-660LE	1
	" -029	"	(FM) RC-660LD/LS	1
L5	VQR7002-302	RF Coil	(SW)	1
BPF	VBP1U3B-001	B.P. Filter	RC-660LE	
	VBP4M3B-001		RC-660LD/LS	
IC1	TA7358P	IC		1
R1	—	—	} Omitting Parts	1
R2	—	—		1
R3	—	—		1
R4	QRD161J-334	C. Resistor	330 kΩ 1/6 W	1
R5	" -471	"	470 Ω "	1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty	
R22	QRD161J-392	C. Resistor	3.9 kΩ	1/6 W	1
R36	" -220	"	22 Ω	"	1
C1	QCS11HJ-220	C. Capacitor	22 pF	50 V	1
C2	" -150	"	15 pF	"	1
C3	" -220	"	22 pF	"	1
C4	QCY41HK-472	"	0.047 μF	"	1
C5	QCT05CH-100	"	10 pF	"	1
C6	" -200	"	20 pF	"	1
C7	" -8R0	"	8 pF	"	1
C9	QCT05UJ-6R0	"	6 pF	"	1
C10	QCF11HP-103	"	0.01 μF	"	1
C14	QCS11HJ-200	"	20 pF	"	1
C62,63	" -103	"	"	"	2
C64	QCT05CH-3R0	"	3 pF	"	1

Amplifier P.W. Board Parts and Parts List of RC-660L/LB

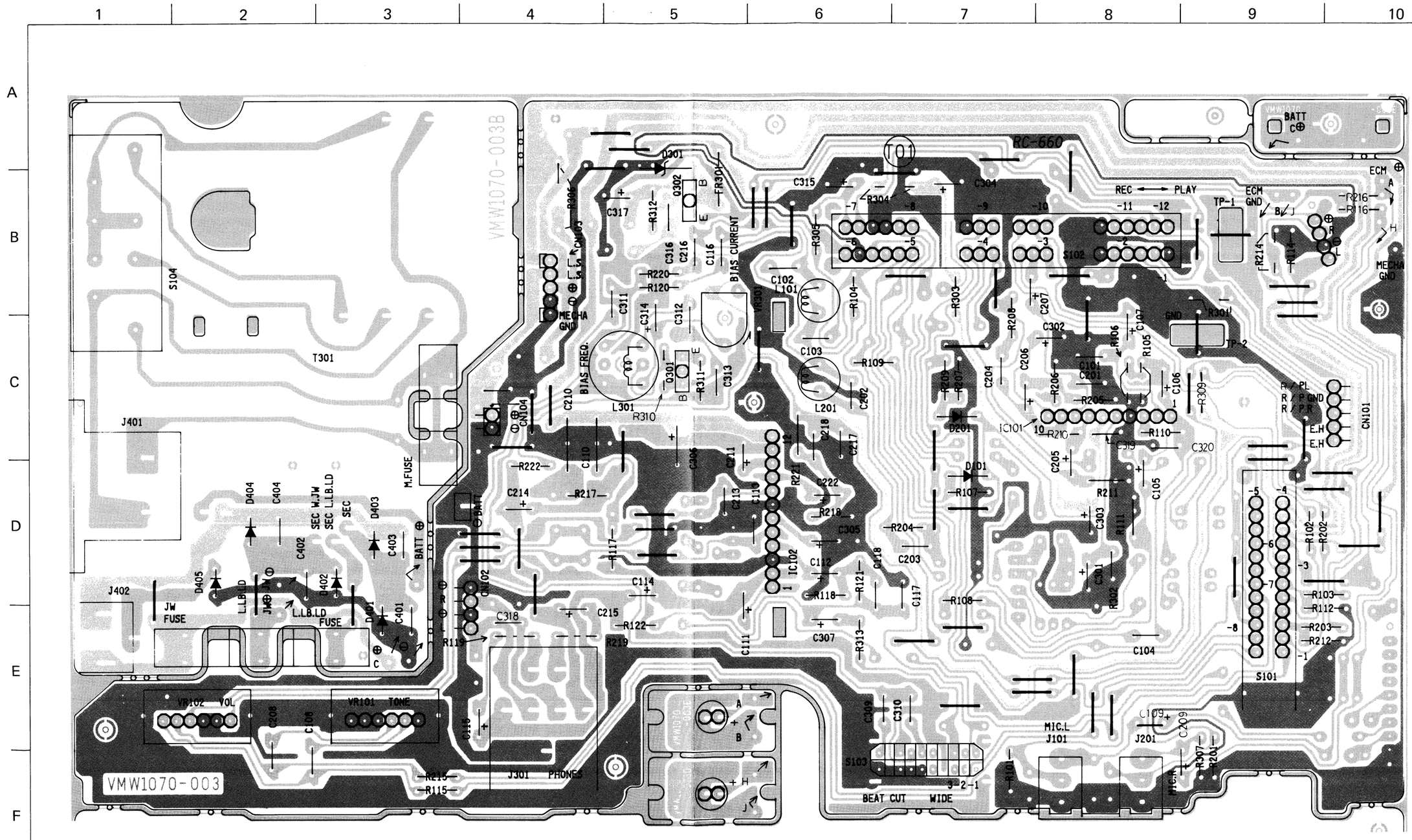


Fig. 20

Amplifier P.W. Board Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	[VMW1070-00XA Amplifier P.W. Board Ass'y]				
	S101-1~8	QSL8210-104	Lever Switch	Radio/Tape	1
	S102-1~12	QSSC201-106	Slide Switch	Play/Rec.	1
	S103	QSS4301-034	〃	Beatcut/Wide	1
	VR101,201	QVN5A2D-024M	V. Resistor	Tone 20 kΩ	1
	VR102,202	QVN5A2A-054M	〃	Volume 50 kΩ	1
	VR301	QVZ3512-201	〃	Bias OSC	1
	J101,201	QMS3501-016	Jack	EXT MIC	2
	J301	QMS6312-012	Headphone Jack	Phones	1
	IC101	M51544L	I.C	Pre Amp.	1
	IC102	TA7232P	I.C	Power Amp.	1
	Q301	2SC1684 (R,S)	Transistor		1
	Q302	2SC1684 (R,S)	〃		1
	—	VYH5368-002	Radiation		1
	D101,201	MA165	Si. Diode		2
	D301	HZ6C3	Zener Diode		1
	L101,201	VQP0001-473	Inductor		2
	L301	VQH1009-026	OSC Coil		1
	C101,201	QCY41HK-152	C. Capacitor	1500 pF 50 V	2
	C102,202	QCS11HJ-121	〃	120 pF 〃	2
	C103,203	QCY41HK-272	〃	2700 pF 〃	2
	C104,204	QFN41HJ-683	M. Capacitor	0.068 μF 〃	2
	C105,205	QET41CR-226	E. Capacitor	22 μF 16 V	2
	C106,206	QET41AR-107	〃	100 μF 10 V	2
	C107,207	QET41HR-105	〃	1 μF 50 V	2
	C108,208	QCC11EM-223	C. Capacitor	0.022 μF 25 V	2
	C109,209	QET41HR-104	E. Capacitor	0.1 μF 50 V	2
	C110,210	QCC11EM-154	C. Capacitor	0.15 μF 10 V	2
	C111,211	QET41AR-107	E. Capacitor	100 μF 〃	2
	C112,212	QET41ER-106	〃	10 μF 25 V	2
	C113,213	QCS11HJ-471	C. Capacitor	470 pF 50 V	2
	C114,214	QET41AR-477	E. Capacitor	470 μF 10 V	2
	C115,215	QET41HR-335	〃	3.3 μF 50 V	2
	C116,216	QCS11HJ-331	C. Capacitor	330 pF 50 V	2
	C117,217	QCC11EM-473	〃	0.047 μF 25 V	2
	C118,119	QCC11EM-104	〃	0.1 μF 〃	2
	C301	QET41HR-475	E. Capacitor	4.7 μF 〃	1
	C302	QET41AR-476	〃	47 μF 10 V	1
	C303	QETC1AM-337	〃	330 μF 〃	1
	C304	QETC1CM-227	〃	220 μF 16 V	1
	C305	QET41ER-475	〃	4.7 μF 25 V	1
⚠	C306	QET41CR-228	〃	2200 μF 16 V	
	C307	QET41HR-105	〃	1 μF 50 V	1
	C308	QET41CR-108	E. Capacitor	1000 μF 16 V	1
	C309	QCC11EM-103	C. Capacitor	0.01 μF 25 V	1
	C310	QCY41HK-682	〃	0.0068 μF 50 V	1
	C311	QFN41HK-152	M. Capacitor	0.0015 μF 〃	1
	C312	QCY41HK-222	C. Capacitor	0.0022 μF 〃	1
	C313	QCC11EM-223	〃	0.022 μF 25 V	1
	C314	QET41AR-476	E. Capacitor	47 μF 10 V	1
	C315	〃 -336	〃	33 μF 〃	1
	C316	QCF11HP-223	C. Capacitor	0.022 μF 50 V	1
	C317	QET41AR-477	E. Capacitor	470 μF 10 V	1
	C318~320	QCS11HJ-151	C. Capacitor	150 pF 50 V	3
	—	QRD161J-xxx	Carbon Resistor	See Schematic Diagram 1/6 W	48
	R117,217	QRH141J-4R7	C. Resistor	4.7 Ω 1/4	2
	R302	QRD121J-106	〃	10 MΩ 1/2 W	1
⚠	R306	〃 -1R0	〃	1 Ω 〃	1
⚠	FR301	QRH141J-100	Fusible Resistor	10 Ω 1/4 W	1
	CN102	QMV5004-004	Connector		1
	CN101	〃 -005	〃		1
	CN103	QMV5005-005	〃		1
	CN104	QMV5004-002	〃		1
	[VMW1070-00XC/D E.C. MIC P.W. Board Ass'y]				
		VMME62N-031	E.C. MIC		2
	[VMW1070-00XB Power Supply P.W. Board Ass'y]				
⚠	T401	VTP48N2-90FBS	Power Transformer	RC-660LB	1
⚠	〃	〃 -90F	〃	RC-660L/LD/LE/LS	1
⚠	—	QMF51A2-R80BS	Fuse	RC-660LB T800 mA	1
⚠	—	〃 -R80	〃	RC-660L/LD/LE/LS T800 mA	1
		A44594-001	Fuse Clip		2
⚠	D401~404	11E1	Si. Diode		4
	C401~404	QCF11HP-223	C. Capacitor		4
	J401	QMC0263-002UBS	AC Socket	RC-660LB	1
		〃 -002U	〃	RC-660L/LD/LE/LS	1
⚠	S104	QSS2325-107BS	Slide Switch	RC-660LB	1
⚠	〃	〃 -107	〃	RC-660L/LD/LE/LS	1
		VND4003-038	Fuse Label		1

RC-660LD/LE Amp. P.W. Board Parts List

Refer to RC-660L/LB Parts List when checking the other parts.

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	Q101,201	2SC1684(R,S)	Transistor		2
	Q102,202	2SD1302(R,S,T)	"		2
	C101,201	QCY41HK-821	C. Capacitor	820 pF 50 V	2
	C104,204	QET41HR-105	E. Capacitor	1 μF "	2
	C105,205	QFN41HJ-683	M. Capacitor	0.068 μF "	2
	C106,206	QET41ER-226	E. Capacitor	22 μF 25 V	2
	C107,207	QET41AR-107	"	100 μF 10 V	2
	C108,208	QET41HR-104	"	0.1 μF 50 V	2
	C109,209	" -105	"	1 μF "	2
	C110,210	QER41HR-335	"	3.3 μF 50 V	2
	C111,211	QCC11EM-223	C. Capacitor	0.022 μF 25 V	2
	C112,212	QCY41HK-681	"	680 pF 50 V	2
	C114,214	QCC11EM-154	"	0.15 μF 25 V	2
	C115,215	" -473	"	0.047 μF "	2
	C116,216	" -104	"	0.1 μF "	2
	C117,217	QETC1AM-477	E. Capacitor	470 μF 10 V	2
	C118,218	QET41AR-107	"	100 μF "	2
	C119,219	QET41ER-106	"	10 μF 25 V	1
	C120,220	" -335	"	33 μF "	2
	C121,221	QCS11HJ-331	"	330 pF 50 V	2

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	C301	QET41HR-475	E. Capacitor	4.7 μF 50 V	1
	C305	QET41AR-107	"	100 μF 10 V	1
	C306	QET41ER-475	"	4.7 μF 25 V	1
	C308	QET41CR-228	"	2200 μF 16 V	1
	C309	QCS11HJ-151	C. Capacitor	150 pF 50 V	1
	C310	QET41CR-477	E. Capacitor	470 μF 16 V	1
	C311	QCC11EM-103	C. Capacitor	0.01 μF 25 V	1
	C312	QFN41HJ-152	M. Capacitor	0.0015μF 50 V	1
	C313	QCY41HK-682	C. Capacitor	0.0068μF "	1
	C314	" -272	"	0.0027μF "	1
	C315	QCC11EM-223	"	0.022 μF 25 V	1
	C316	QET41AR-107	E. Capacitor	100 μF 10 V	1
	C317	QCF11HP-223	C. Capacitor	0.022 μF 50 V	1
	C318	QETC1AM-477	"	470 μF 10 V	1
	C319,320	QCS11HJ-151	"	150 pF 50 V	2
	C321	QET41ER-106	E. Capacitor	10 μF 25 V	1
	——	QRD161J-xxx	C. Resistor	1/6 W	54
	R123,223	QRH141J-4R7	Fusible Resistor	4.7 Ω 1/4 W	2
	L302	T41572-001	Inductor		1
	D502,512	MA165	Si. Diode		2

RC-660LD/LE/LS DIN Jack P.W. Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
VMW3198-002 DIN Jack P.W. Board Ass'y				
J501	QMC9014-006	DIN Jack Ass'y		1
S501-1-4	QSP4210-061	Push Switch		1
D501,511	MA165	Si. Diode		2
R501,511	QRD144J-155S	C. Resistor	1.5 MΩ 1/4 W	2
R502,512	" -155S	"	1.5 MΩ "	2
R503,513	" -222S	"	2.2 kΩ "	2
	VYH5388-001	DIN Bracket		1
	SPSP2606Z	Screw		2

DIN P.W. Board

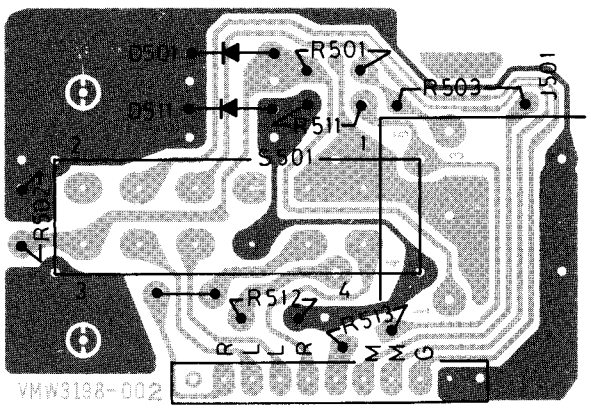


Fig. 21

Amplifier P.W. Board of RC-660LD/LE/LS

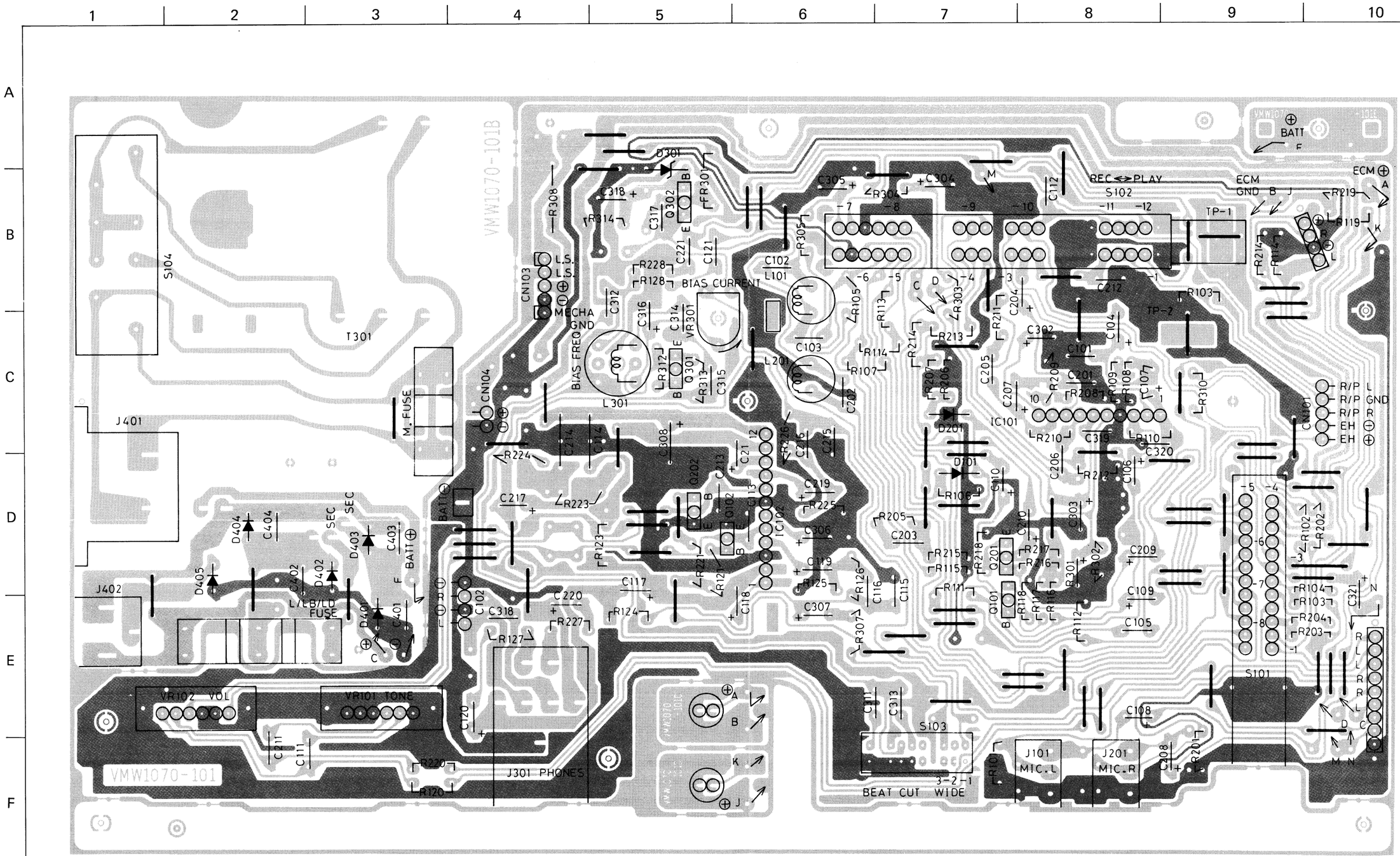


Fig. 22

Wiring Connections

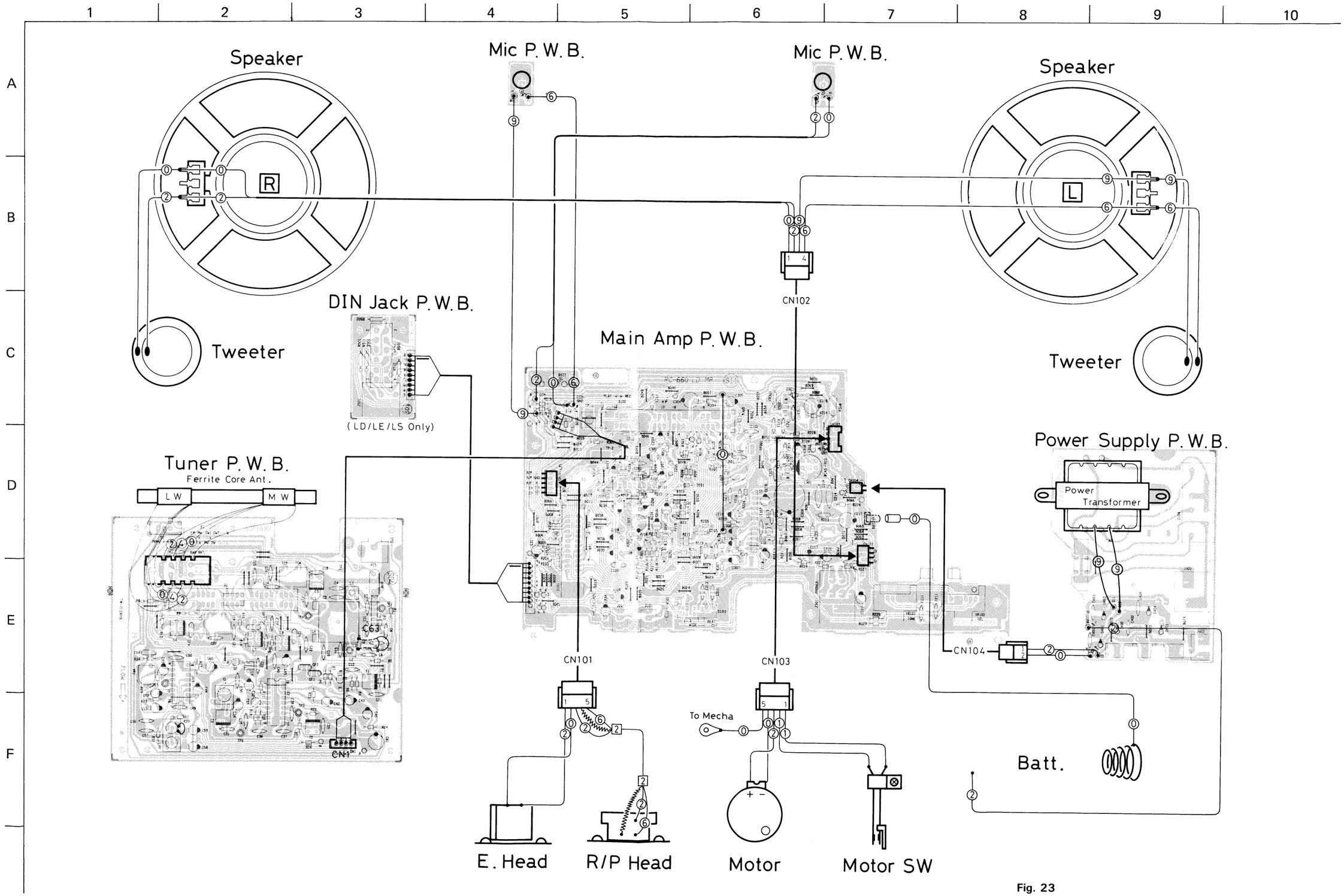


Fig. 23

Mechanical Component Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	180001501ZT	Mecha. Chassis Ass'y		
2	18000201T	Rec. Safety Lever		1
3	18000316T	Head Panel		1
4	18000305T	Head Base		1
5	180003305ZT	Detector Plate Ass'y		1
6	VGH0421-010	R/P Head		1
7	14400315T	Head Spring		2
8	VGH0212-205	E. Head		1
9	180004301ZT	Pinch Roller Arm Ass'y		1
10	18000405T	Pinch Roller Spring		1
11	180005301ZT	Take-up Reel Ass'y		1
12	18000508T	Back Tension Spring		1
13	180005302ZT	Supply Reel Ass'y		1
14	18000516T	Back Tension Spring		1
15	180006312ZT	RF. Cluth Ass'y		1
17	180006503ZT	Take-up Roller Arm Ass'y		1
18	18000635T	Take-up Roller		1
19	18000609T	Collar		1
21	18000610T	F.F. Gear		1
22	180007312ZT	Flywheel Ass'y		1
24	15100134T	Pack Spring		1
25-1	18000934	Button Base (R)		1
25-2	18000935B	〃 (L)		1
26	18000902T	Rec. Button Lever		1
27	18000940T	Play Button Lever		1
28	18000906T	Rew. Button Lever		1
29	18000908T	F.F. Button Lever		1
30	18000909T	Stop Button Lever		1
31	180009501ZT	Pause Button Lever Ass'y		1
32	180009320ZT	Lock Plate Ass'y		1
33	17000921T	Lock Plate Boss		1
34	18000917T	〃		1
35	VXP3081-002	Push Button	for Play	1
36	VXP3082-005	〃	for Pause	1
37	〃 -006	〃	for Stop/Eject	1
38	〃 -007	〃	for F.F.	1
39	〃 -008	〃	for Rew.	1
40	VXP3083-002	〃	for Rec.	1
41	18000918T	Flange Cup Screw		6
42	⚠180010328ZT	Motor Ass'y		1
43	18001036T	Motor Bracket		1
44	5880910T	Motor Cushion		3
45	12001201T	Collar Screw (S)		3
46	4461102T	Mat		2
47	18001010T	Main Belt		1
48	12221702T	Pause Lever		1
49	18201032T	Pause Stopper		1
51	18001101AT	Eject Slide Lever		1
52	17000310T	Collar Screw		1
55	LSA-1120C01T	Leaf Switch		1
70	97870000T	Polyslider Washer	for Capstan (ϕ1.55×ϕ5×t0.5)	1
71	97760000T	Nylon Washer	for Capstan (ϕ2.05×ϕ8×t0.5)	1
72	94210000T	Polyslider Washer	for Take-up Roller×1, for F.F. Gear×1 (ϕ1.2×ϕ3×t0.25)	2
73	15601501T	Washer	R/P Head (ϕ2.1×ϕ5×t0.4)	1
74	16100604T	Polyslider Washer	for Supply Reel Ass'y×1 for Take-up Reel Ass'y ×1 (ϕ1.6×ϕ3.8×t0.3)	2

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
75	18000907T	Spring	for FF Button	1
76	18000608T	〃	for Take-up Roller Arm	1
77	18000903T	〃	for Rec. Button	1
78	18000957T	〃	for Play Button	1
79	18000905T	〃	for Rew. Button × 1	1
80	18000903T	〃	for Stop Button	1
81	18000957T	〃	for Pause Button	1
82	18000919T	〃	for Lock Plate	1
83	18000707T	〃	for Thrust Spring	1
84	18000961T	〃	for Auto Lever	1
85	18000958T	Pause Spring	for Pause Lever	1
86	18001129T	Spring	for Eject Slide Lever	1
87	20PZ26040T	Tap. Screw	for Peak Spring × 1, Motor Bracket × 2	3
88	17152015T	Stopper	for Pinch Roller Arm Ass'y	1
89	SPSD2004Z	TH. Tap. Screw	for Take-up Roller × 1, Lock Plate × 1	3
90	SPSF2006Z	Tap. Screw	for Leaf Switch	1
92	SPSX2007Z	PM. Screw	for R/P Head	1
93	98210000T	Cap Screw		2
97	98200000T	Cap Screw	for R/P Head	1
98	13270412AT	U Washer	for E. Head t0.1	1
100	18001404T	RC Spring	〃	1
102	18000309T	Spring (B)	for Head Panel	1
103	98610000T	Collar Screw	Lock Plate × 1	1
106	18001127T	Collar	for Eject Slide Lever	1
107	SPSD3006Z	TH. Tap. Screw		1
109	18000629T	RF. Pulley Arm Stopper		1
110	97180000T	Collar Screw	Lock Plate	1

Mechanism Component Parts

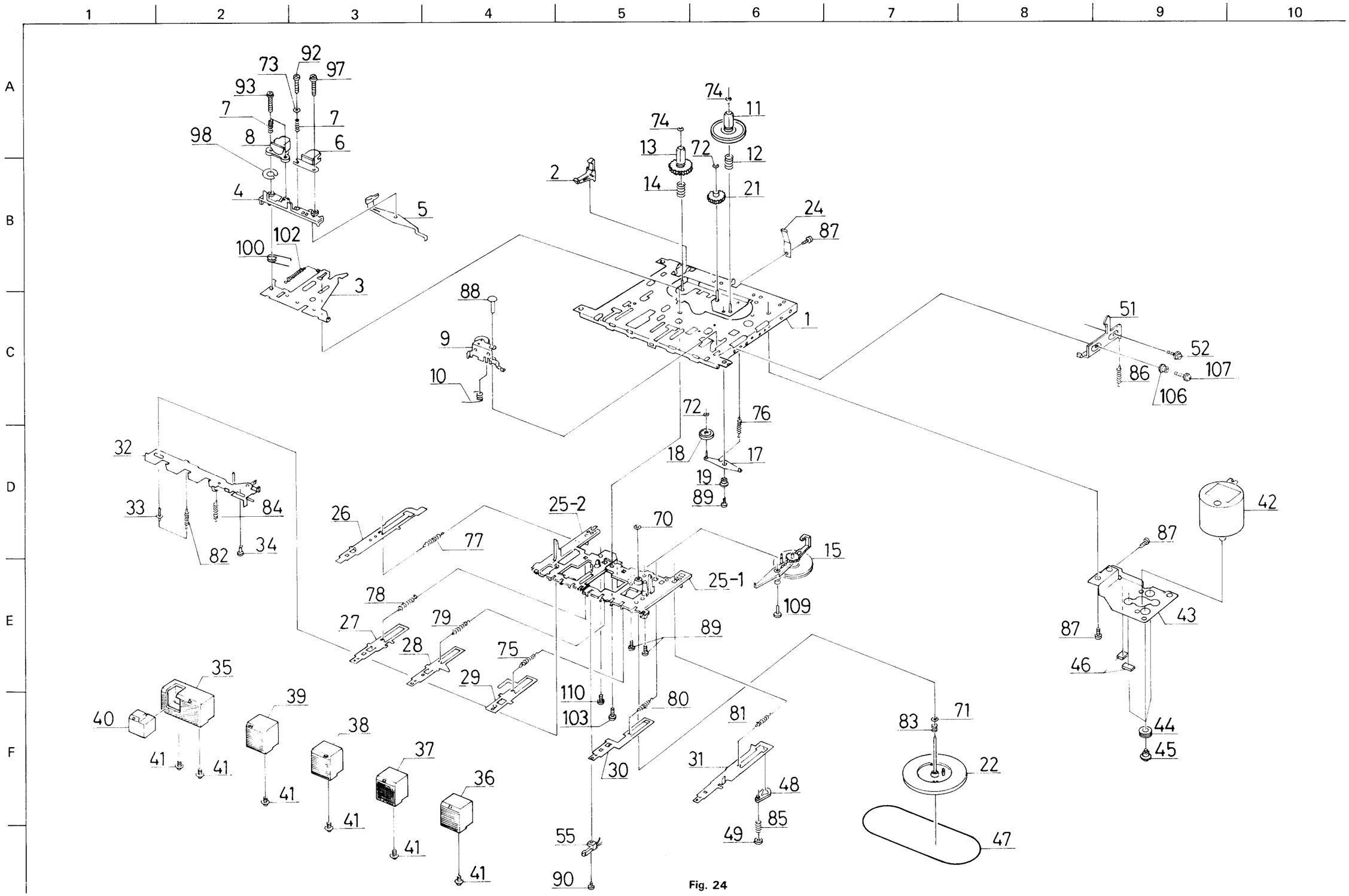


Fig. 24

Enclosure Assembly Parts

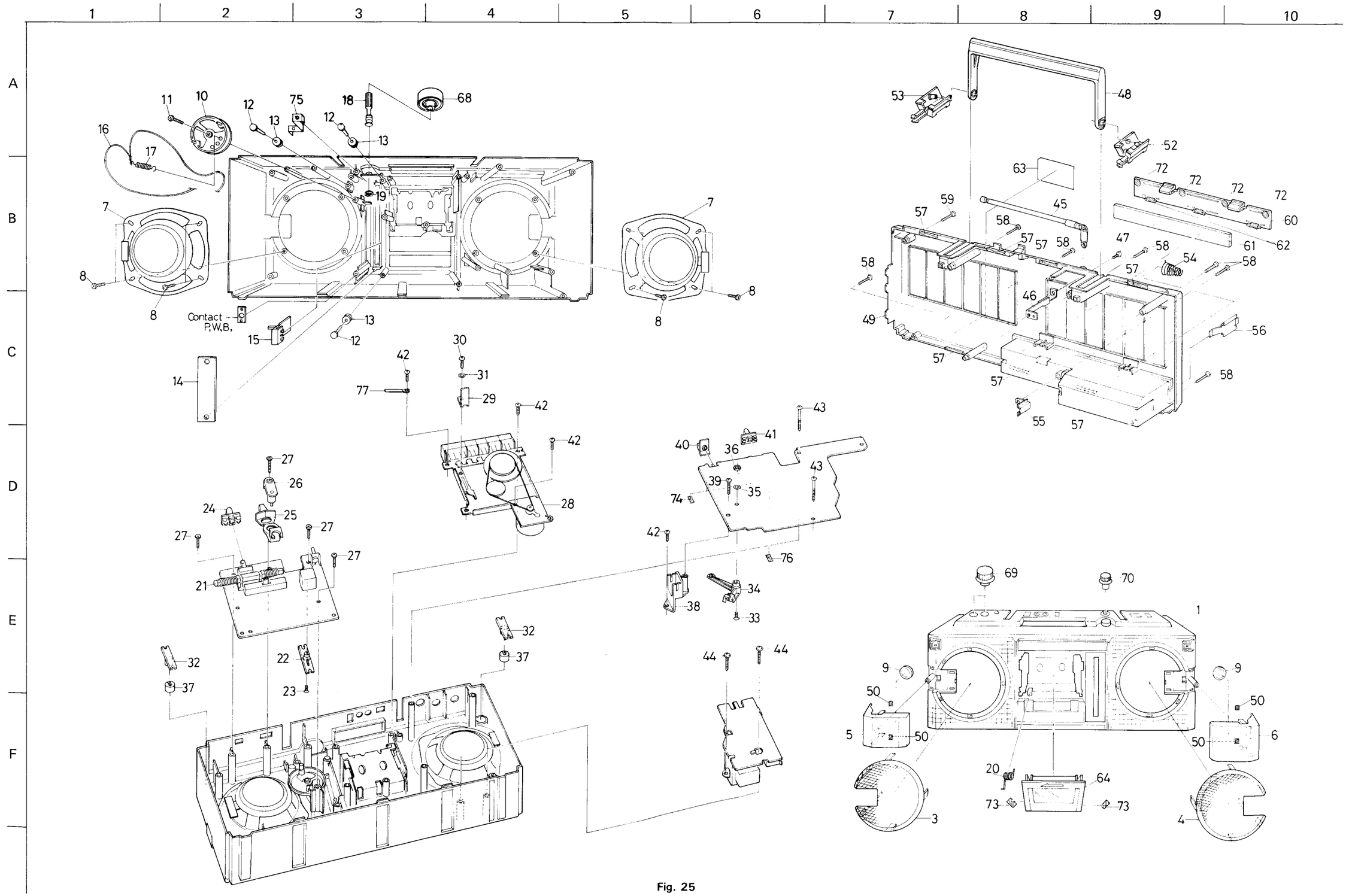


Fig. 25

Enclosure Assembly Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
		ZCRC660Y-CBF	Front Cabinet Ass'y		
	1	VJC1297-00B	Front Cabinet Ass'y	RC-660LB	1
	〃	〃 -00D	〃	RC-660LD,LE	1
	〃	〃 -00F	〃	RC-660LS	1
	〃	VJC1209-003	Front Cabinet	RC-660LB,LE	1
	〃	〃 -004	〃	RC660LD	1
	〃	〃 -006	〃	RC660LS	1
	〃	VJC4210-001	Dial Lens		1
	3	VJD3420-001	Punching Panel(L)		1
	4	VJD3421-001	〃 (R)		1
	5	VJD3431-001	Tweeter Grill	Left	1
	6	〃 -002	〃	Right	1
	7	HSA1299-01D	Speaker	Woofer	2
	8	GBSF3008Z	W. Tap Screw		8
	9	EFB-S77D41	Speaker	Tweeter	2
	10	VYH5338-001	Dial Drum		1
	11	GBSF3020Z	W. Tap Screw		1
	12	VYH4034-002	Stud		3
	13	VYH4002-001	Roller		3
	14	VJK4202-001	Dial Back		1
	15	VJN4082-001	Pointer		1
	16	VHR2ZK9-04AT	Dial Cord	620mm	1s
	17	50153-3	Spring		1
	18	VYH4027-004	Tuning Shaft		1
	19	REE4000	E. Ring		1
	20	VYH4941-001	Door Spring		1
	21	VQB012B-314	Ferrite Core Antenna	L3,L4	1
	22	VYH5267-002	Arm		1
	23	SSSP2608Z	Screw		1
	24	VXS4109-001	Slide Knob	Mode	1
	25	VXQ3038-001	Toggle Lever	Band	1
	26	VYH5269-001	Lever Holder		1
	27	SBSF3018C	Tap. Screw	Tuner + F. Cabi	4
	28	—	Mecha Ass'y		1
	29	VYH5276-001	Rec Spring Plate		1
	30	LPSP2604Z	Ass'y Screw		1
	31	WNS2600Z	Washer		1
	32	VMME62N-031	E.C. Mic		2
	33	VYH4043-002	Special Screw		1
	34	VYH5271-001	Rec Lever		1
	35	WNS2600Z	Washer		1
	36	NTB2600	Not		1
	37	VYH4348-001	Mic Bushing		2
	38	VYH5268-001	Bridge		1
	39	SBSF3008Z	Tap. Screw		1
	40	VXQ4058-001	Lever Cap	Function	1
	41	VXS4109-001	Slide Knob		1
	42	SBSF3014C	Tap. Screw	Mecha + F. Cabi	3
	43	VKZ4008-002	〃	Amp + F. Cabi	2
	44	GBSF3020C	W. Tap. Screw	Power Supply	2
	45	VJA3006-00C	Terescopic Ant. Ass'y		1
	46	VYH5278-001	Ant. Connect		1
	47	SDSP3012R	Screw		1
	48	VJH3028-00A	Handle Ass'y		1
	49,63	ZCRC660Y-CBR	Rear Cabinet Ass'y		1
	49	VJC1299-101	Rear Cabinet		1
	50	VYSP102-009	Spacer		4
	52	VYH5272-001	Handle Supporter(L)		1
	53	VYH5273-001	〃 (R)		1
	54	53738-1	Spring	⊖	1
	55	VYH5352-001	Battery Contact	⊕	1
	56	VYH4104-002	〃	⊕ ⊖	1
	57	VYSA1R4-050	Spacer		7
	58	SBSF3016R	Tap. Screw	F. Cabi + R. Cabi	7
	59	VKZ4008-002	〃	〃	1
	60~62,72	ZCRC660Y-BCA	Batt Cover Ass'y		1
	60	VJC2016-006	Battery Cover		1
	61	VYSH106-020	Spacer		1
	62	VYSA1R6-034	〃		3
	63	VYN5091-001	Name Plate	RC-660LB	1
	〃	〃 -010	〃	〃 L	1
	〃	〃 -003	〃	〃 LD,LE	1
	64	VJT3118-00B	Door Ass'y		1
	68	VXL4193-001	Tuning Knob		1

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	69	VXL4107-101	Knob	Vol. Tone	2
	70	VXL4194-001	〃	Fine	1
	72	VYSR2R5-004	Spacer		4
	73	VYH5411-001	Damp Spacer		2
	74	VYSH103-017	Spacer	Amp. P.W. Board	1
	75	VYH5274-002	Connector		1
	76	VYSH102-022	Spacer	Amp. P.W. Board	1
	77	VKZ4001-007	Wire Holder		1

Packing

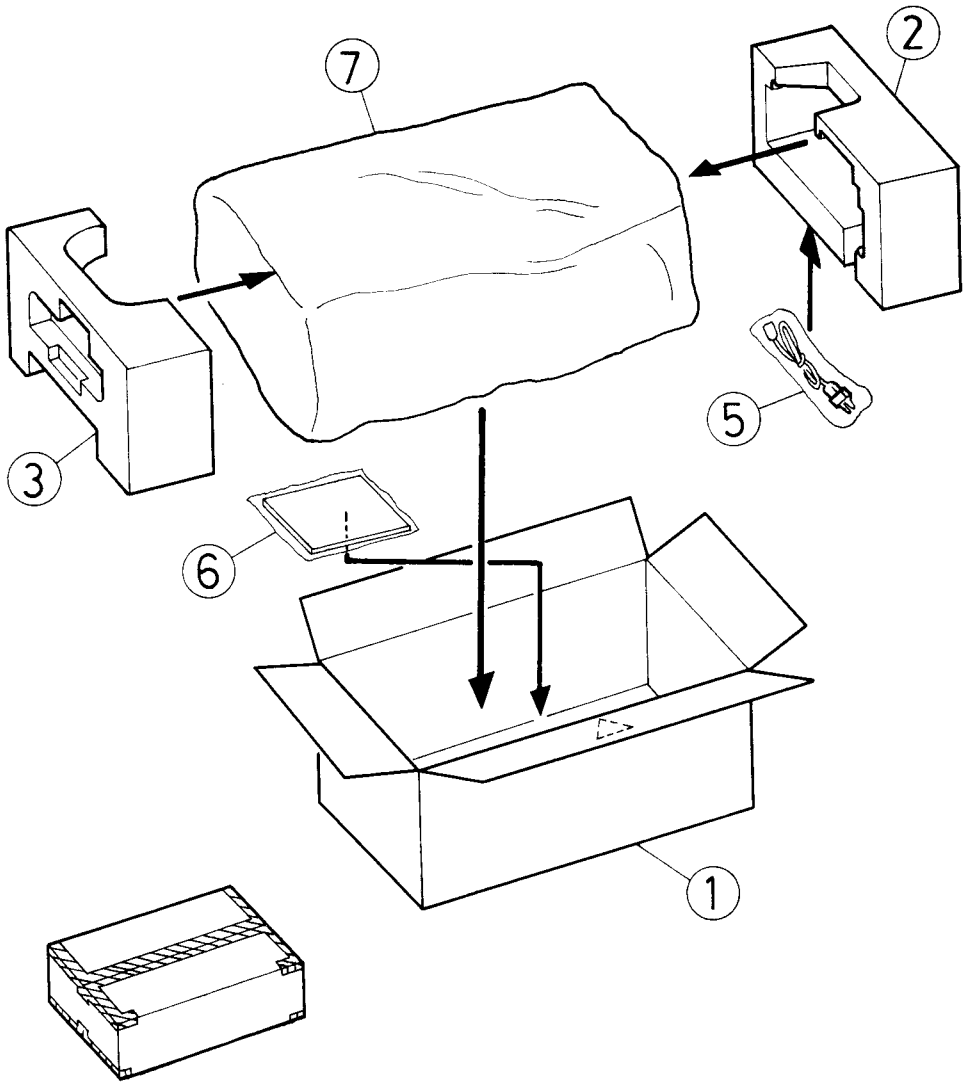


Fig. 26

Packing Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VPD5091-J02	Carton	RC-660LB	1
	〃 -J04	〃	RC-660L	1
	〃 -J05	〃	RC-660LD	1
	〃 -J20	〃	RC-660LS	1
	〃 -J17	〃	RC-660LE	1
2	VPH1273-001	Side Cushion (R)		1
3	VPH1272-001	〃 (L)		1
5	QPGA012-01505	Poly Bag	for Power Cord	1
6	QPGB024-03404	〃	for Inst. Book	1
7	OPGA070-04005	〃	RC-660L/LD/LE/LS	1
〃	VPE3002-008	〃	RC-660LB	

Accessories

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Parts No.	Parts Name	Remarks	Q'ty
	VNM0909-301	Instruction Book		1
	VNF0908-001	Feature Tag		1
	53866-5	Label	RC-660LB	1
	31465-18	Mark	RC-660LB	1
	BT20054-003A	Caution Sheet	RC-660LD/LE/LS	1
	BT20065	Warranty Card	RC-660LD	1
	BT20066	〃	RC-660LD	1
	BT20013C	Guarantee Certificate	RC-660LB	1
	QZL1002-003	Warning Label	RC-660LB	1
⚠	QMP9017-009BS	Power Cord	RC-660LB	1
⚠	QMP3950-183	〃	RC-660L/LD/LE/LS	1